

Very Shallow Water Mine Countermeasures



Prepared for: MINWARA Spring 07

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Naval Special Clearance Team ONE



Overview



- Mission
- Structure
- Concept of Operations
- Unmanned Systems
- Today's Focus
- MCM Realignment



Command Mission

Conduct clandestine underwater mine and obstacle reconnaissance and clearance operations from over the horizon to the seaward edge of the surf zone

Conduct harbor clearance operations and assist in Homeland Defense oriented harbor protection EOD missions from a FOB in permissive and semi-permissive environments



Surf Zone & CLZ

0' - 10'

Very Shallow Water

10' - 40'

Shallow Water

40' - 200'

Deep Water

Over 200'

Obstacles

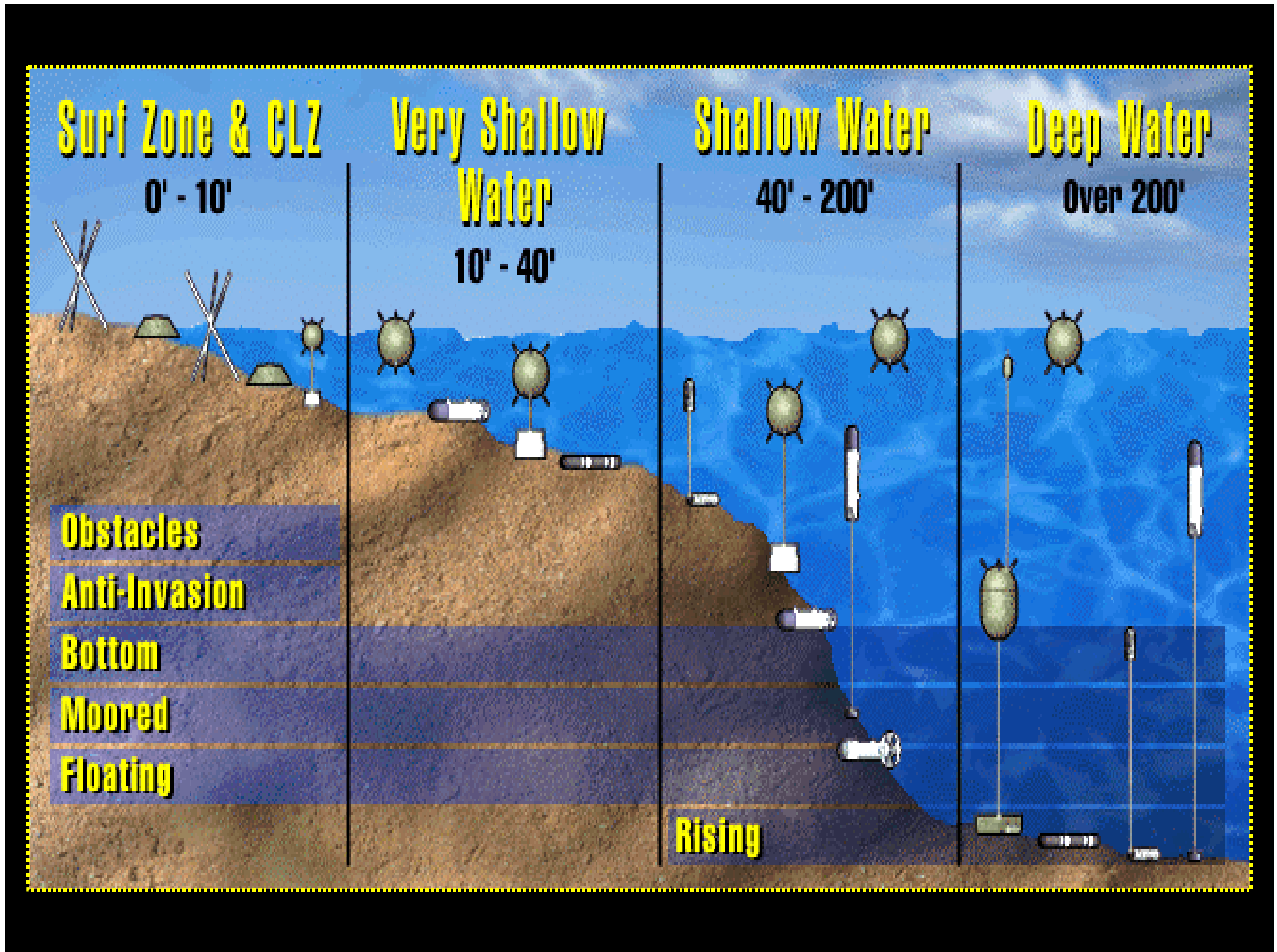
Anti-Invasion

Bottom

Moored

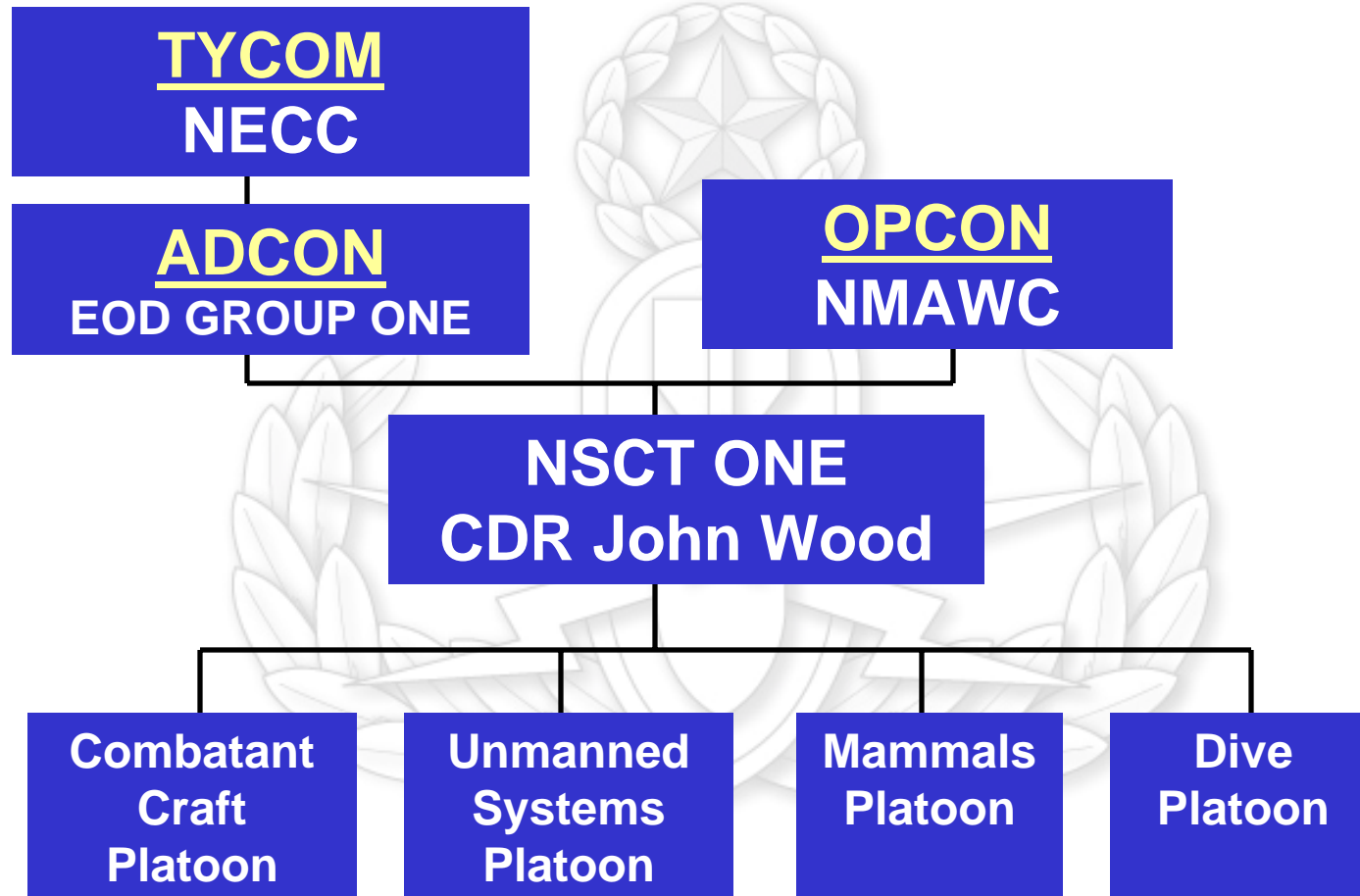
Floating

Rising





NSCT-1 Structure

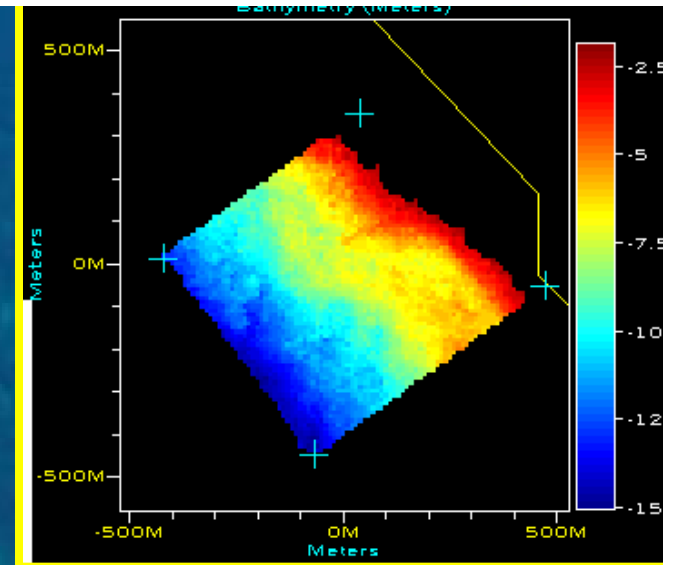
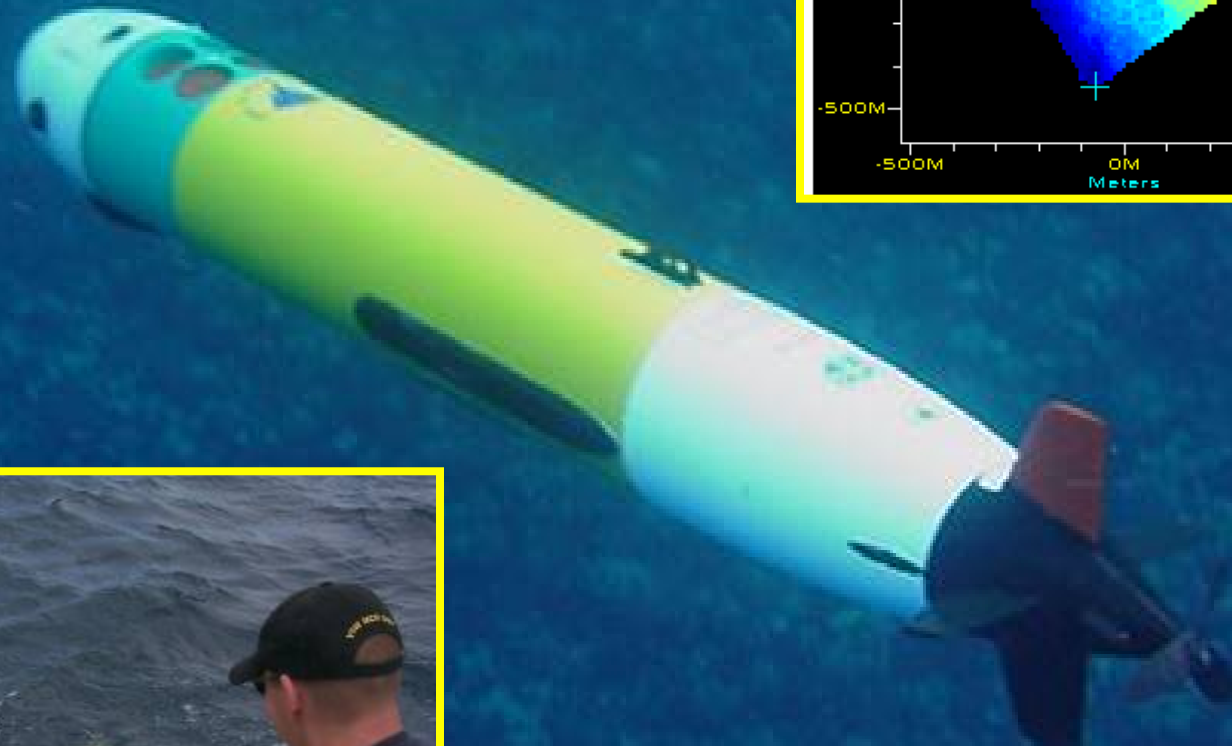


Combatant Craft Platoon

Mission: Insert and extract forces from over the horizon, conduct diversionary operations, and provide force protection.



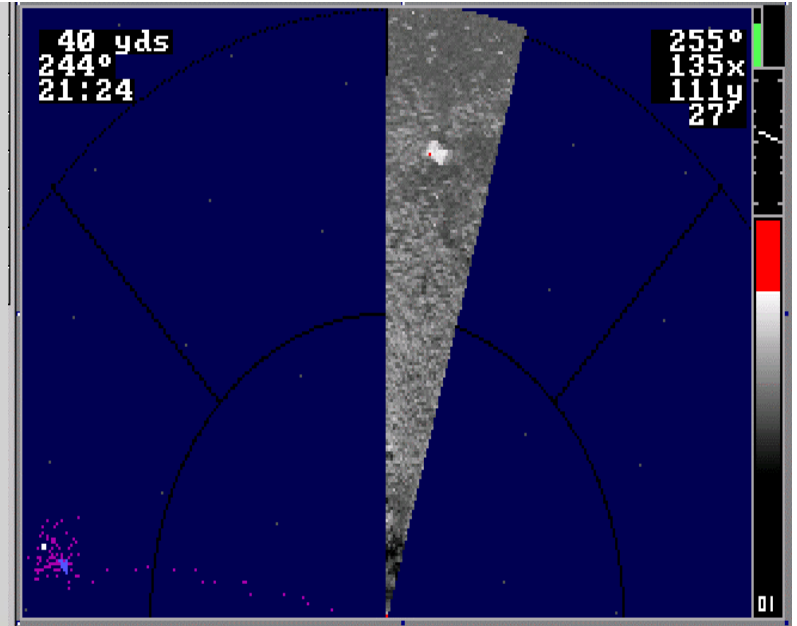
Unmanned Systems Platoon





Marine Mammal Systems

Dive Platoon





Concept of Operations



- Phase 0: Clear access to VSW zone
- Phase 1: Hydrographic Reconnaissance
- Phase 2: Lane Selection
- Phase 3: Mine Hunt
- Phase 4: Mine Clearance

Additional risk reduction:

- Detailed UUV survey of selected lanes
- Divers search at pre-determined points



Unmanned Systems



- VSW UUV Long term vision:
 - Search, Classify, and Map (SCM)
 - Reacquire and Identify (RI)
 - Neutralization (UUV-N)



- SCM: Swordfish capabilities
 - 900khz sonar
 - GPS navigation for OTH insertion/extraction
 - Low light video camera module
 - Transponder USBL and LBL for precise area search



Unmanned Systems



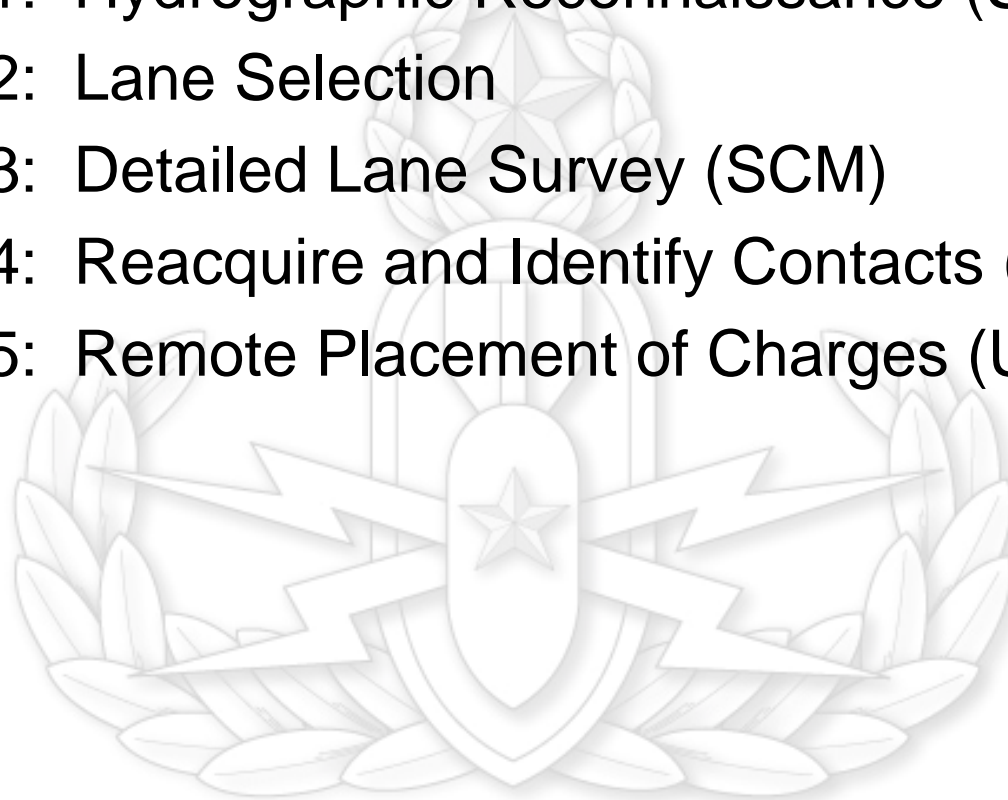
- Reacquire and Identify (RI) desired capabilities:
 - Dual frequency 900/1800khz sonar
 - Specialized search patterns
 - Low Light video camera
 - On Board CAD/CAC program
 - On-the-fly reprogramming
- Neutralization (UUV-N) desired capabilities:
 - Strong station keeping characteristics
 - Light weight / 1 man deployable
 - Low cost
 - Autonomous
- Integration of UAVs into CONOPS
- Bottom & Hull Search ATFP/EOD UUVs



Future VSW CONOPS with Advanced Technology



- Phase 1: Hydrographic Reconnaissance (SCM)
- Phase 2: Lane Selection
- Phase 3: Detailed Lane Survey (SCM)
- Phase 4: Reacquire and Identify Contacts (RI)
- Phase 5: Remote Placement of Charges (UUV-N)





Today's Focus in GWoT Environment



- GWoT
- Post-assault VSW or harbor clearance
- Harbor and waterway clearance in support of Homeland Defense and Humanitarian Assistance Disaster Relief
- War fighting laboratory



Navy EOD



- GWoT
 - Temporary suspension of VSW MCM requirement
- Navy EOD support to Global MCM requirements:
 - Shift OPCON of NSCT-1 to EOD Group ONE
 - Transform NSCT-1 to EOD Mobile Unit ONE
 - Maintain VSW capability as Company sized element
 - Add 4 EOD Detachments (2 MCM)
 - Leverage different skill sets for specific mission
 - Maximizes potential to meet real world MCM tasking



Questions ??