***Oculina and Stetson-Miami Terrace* HAPC expansion alternatives**: An opportunity to sustain shrimp fisheries and protect hard bottom and *Oculina* formations

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History of East Florida Rock Shrimp Fishery

1968- NOAA encouraged development of Rock Shrimp fishery. Method for preparing Rock Shrimp for consumption developed by Rodney Thompson in Port Canaveral, FL

1971- *Ponce Seafood* established for hand-processing of Rock Shrimp

1984- Modified Lathram peeling machine to mechanize processing

1995- Rock Shrimp added to Shrimp FMP, 155 permits issued

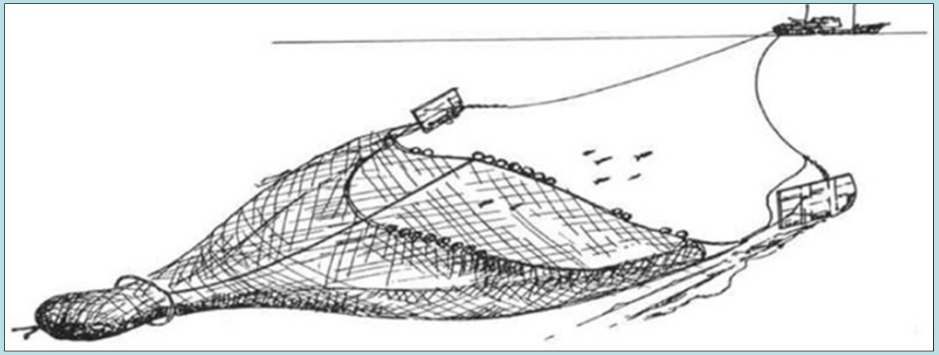
2003- VMS requirement on Deep-water shrimp vessels in South Atlantic

2011- 98 active permits, but only 15 vessels landed Rock Shrimp in the South Atlantic

East Florida Rock Shrimp Landings average= **2 to 5 million lbs./ yr.**


FISHING AND CARGO INDUSTRIES
1953 – Commercial fishing began
4 – First oil imported for Central Florida power p
55 – First merchant ship, S/S Mormac Spruce arri
1962 – First bulk cement silos built
66 – First newsprint imported by Abitibi Consolida
1968 – First rock shrimp commercial processing
developed by Rodney Thompson
1978 – First grapefruit exported to Japan
1990 – Morton salt plant constructed

Misconceptions about deep water shrimp trawling and sustaining adjacent hard bottom habitats



Shrimp FMP:

1) Shrimp trawling is performed in mud-sand bottoms, not hard bottom or *Oculina* coral areas

2) Shrimp trawlers “mark” hard bottom and obstructions to avoid, gear loss= $15k per side, safety issue, lost sea time, our tracking data support this

Soft-bottom adjacent to *Oculina* bank is productive and historically important Rock Shrimp fishery- upwelling, nutrient and organic matter build-up important for deep shrimp fisheries

Problems with using VMS

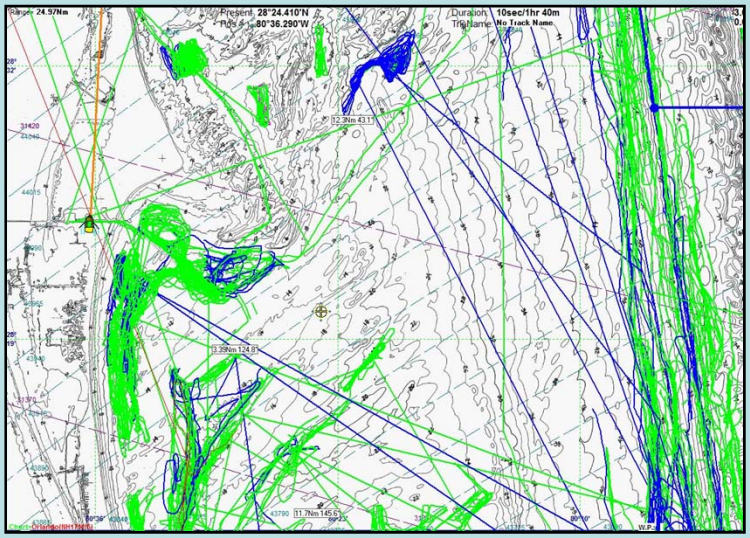
Problems with using VMS to indicate Rock Shrimp fishery

Staff gave "misleading" analysis that OHPAC expansion would result in "minor" loss of Rock Shrimp fishery

"Blue" polygon:

1) includes significantly more VMS hits (e.g. white shrimp fishery) other than "Rock Shrimp trawling" effort

2) does not indicate traditional Rock Shrimp fishing area



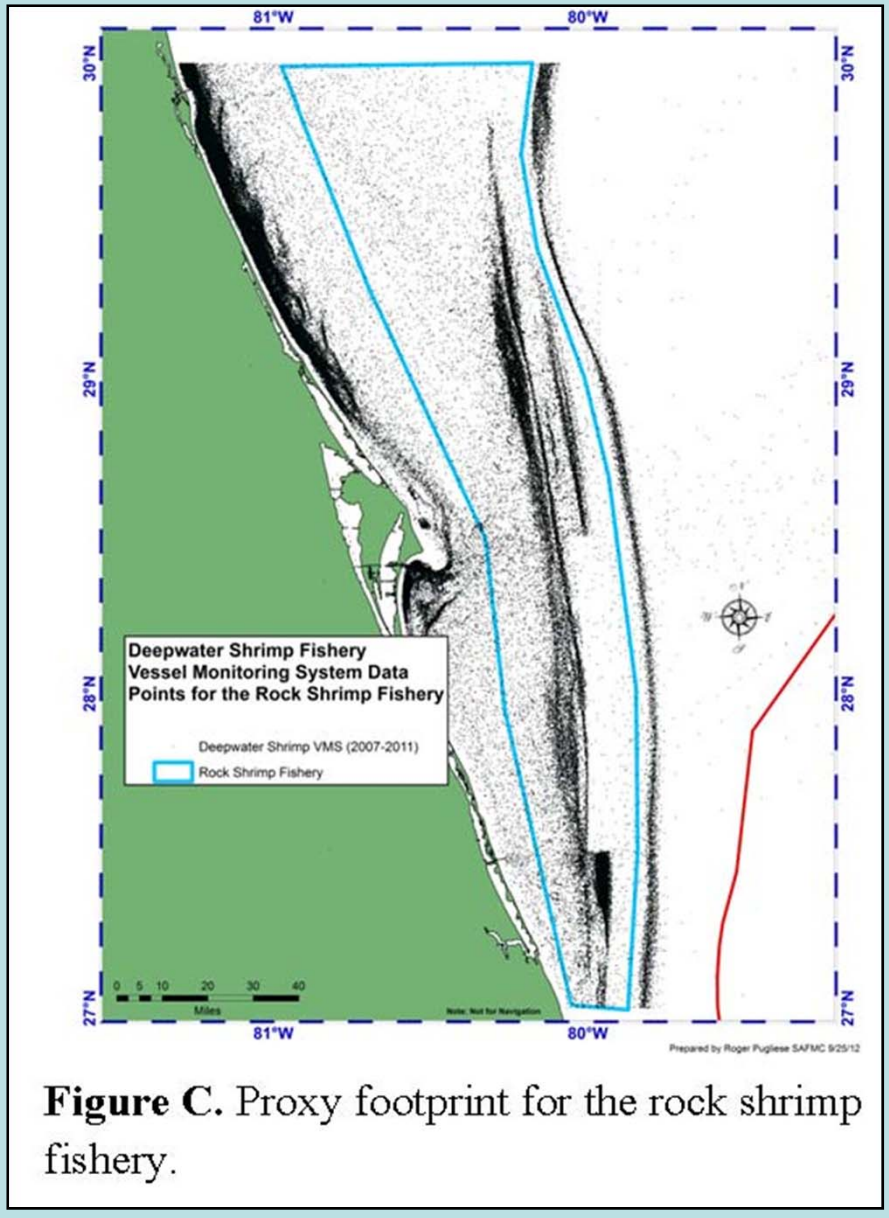
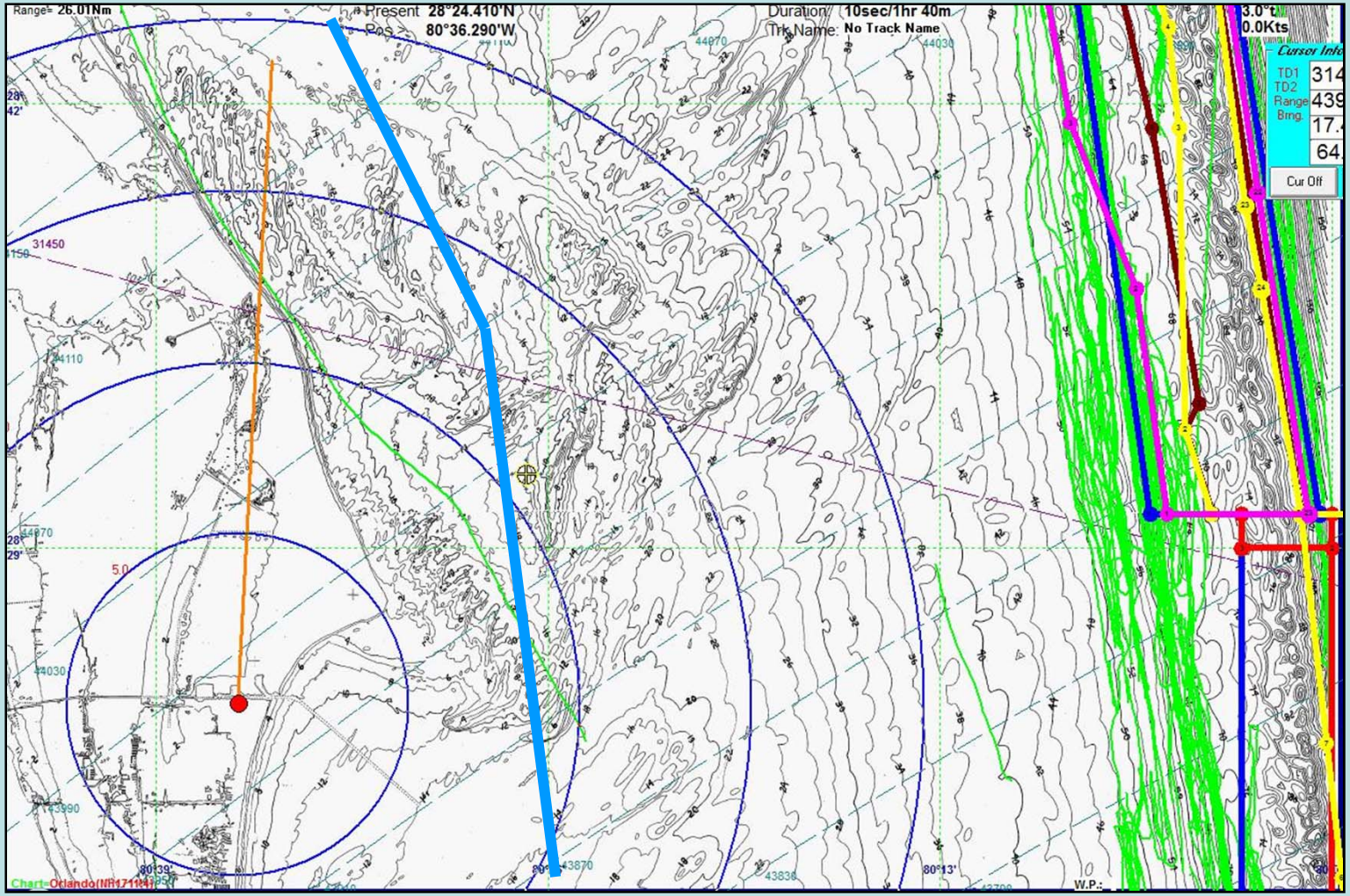


Figure C. Proxy footprint for the rock shrimp fishery.

Staff analysis can’t discriminate VMS for specific Rock Shrimp <u>fishing effort</u>, vs. transit (Royal Red, Rock Shrimp) and “marking” hard-bottom. **Green tracks= fishing effort, Blue= ~Staff VMS polygon**

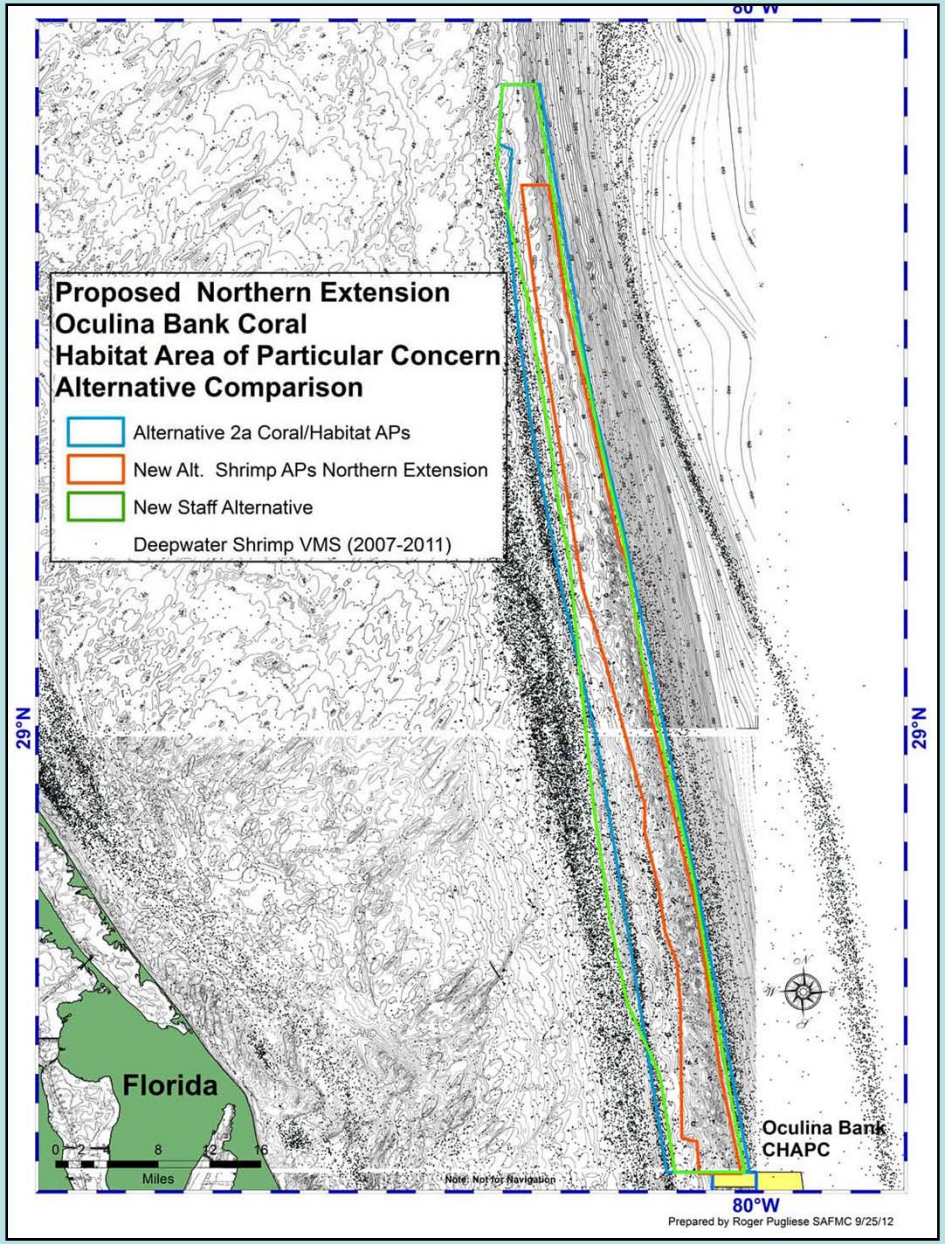


Northern Extension

Problems with SAFMC's "new" northern OHAPC alt

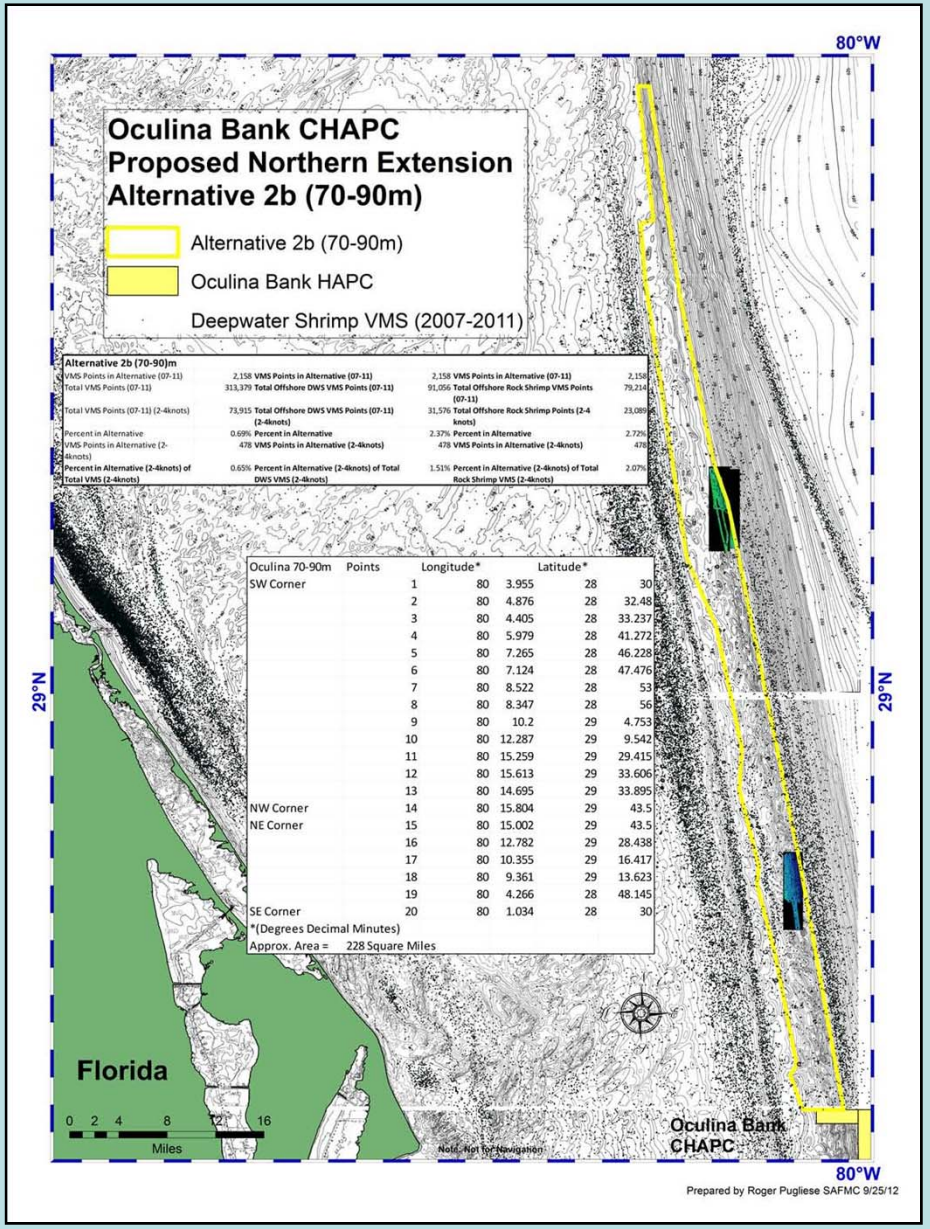
SAFMC staff has added shallower (50m) hard-bottom ledges to add to offshore (80m) *Oculina* Bank HAPC

Further reduces Rock Shrimp fishery located between *Oculina* Bank and 50m ledge

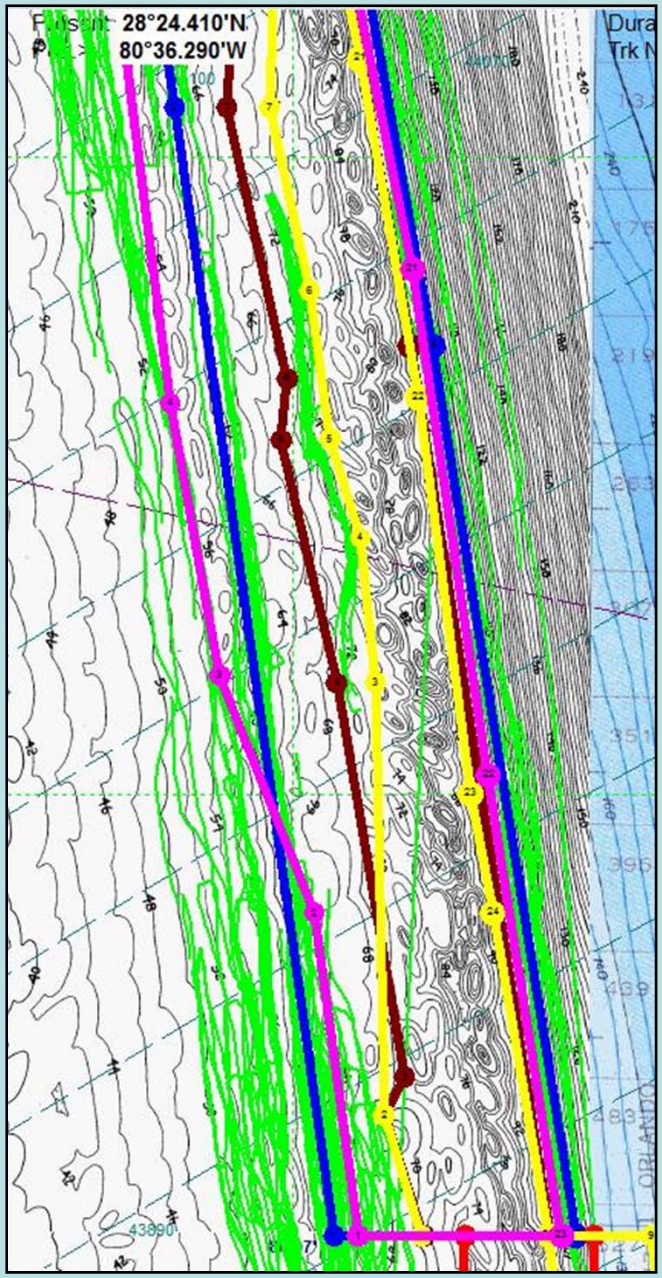


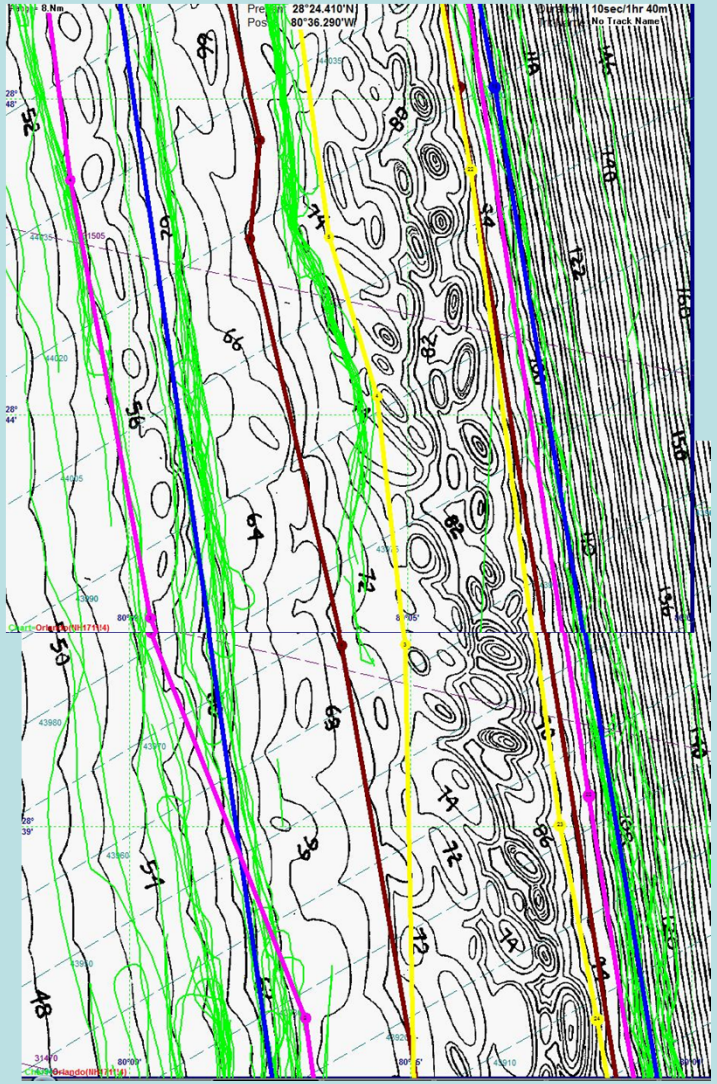
Shrimp AP's- *Oculina* HAPC Alt. 2b

Reduces extension to 80m ledge where *Oculina* found, retains historic Rock shrimp fishery inshore and offshore of *Oculina* bank



Shrimp AP's *Oculina* HAPC Alt 2b (WinPlot™)





Proposed OHAPC Alt.

Blue= Coral AP's preferred alt.

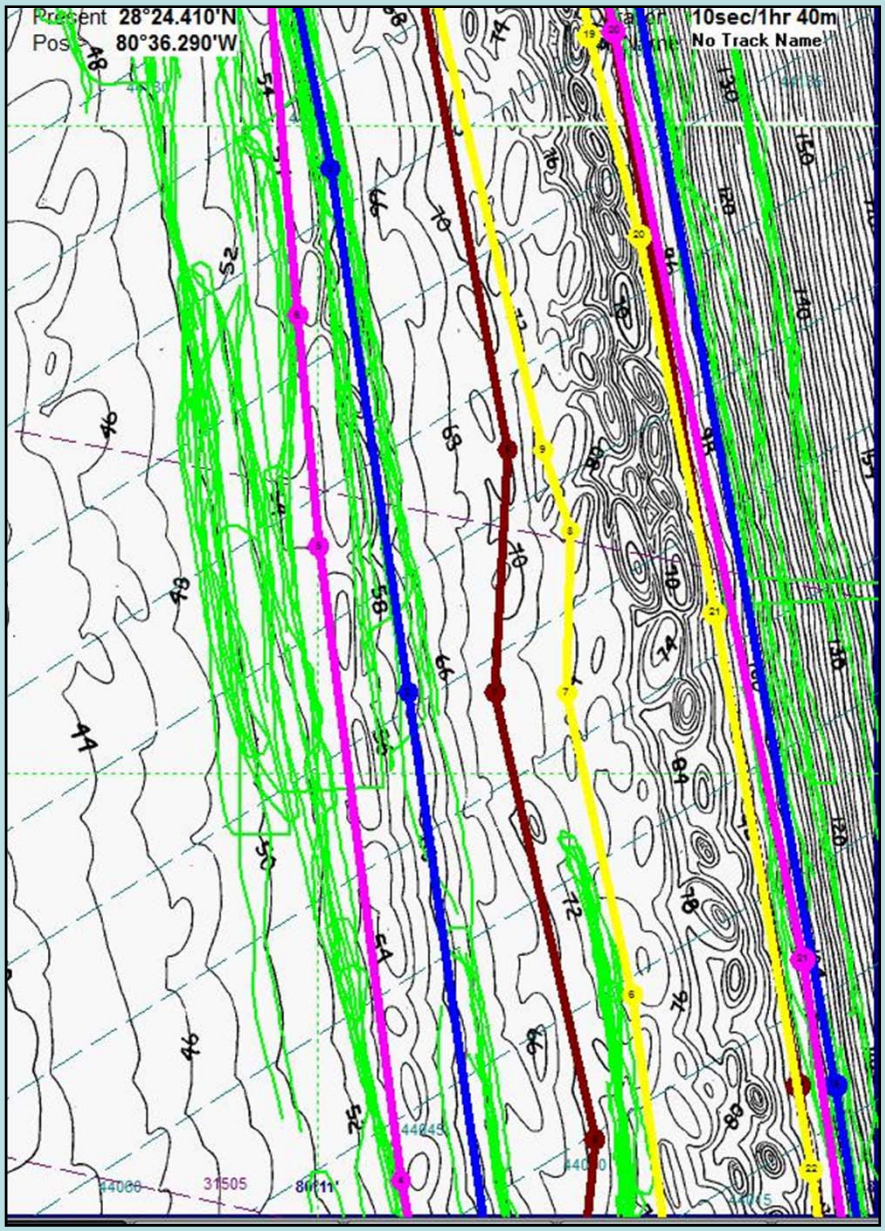
Yellow- Deepwater Shrimp AP's preferred alt.

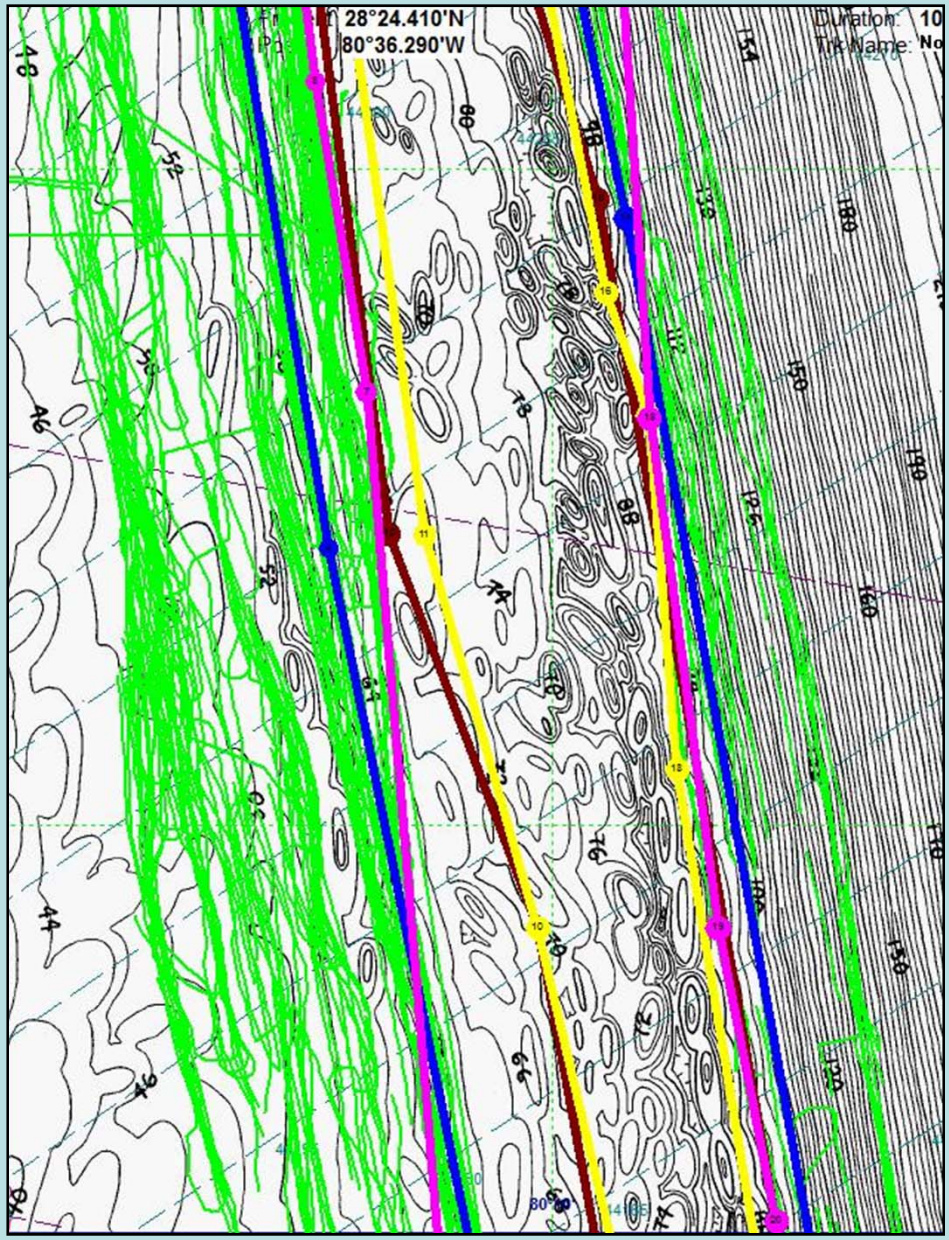
Magenta= SAFMC's staff "new" alt. (Oct. 2012)

Burgundy= 70-90m Alt.

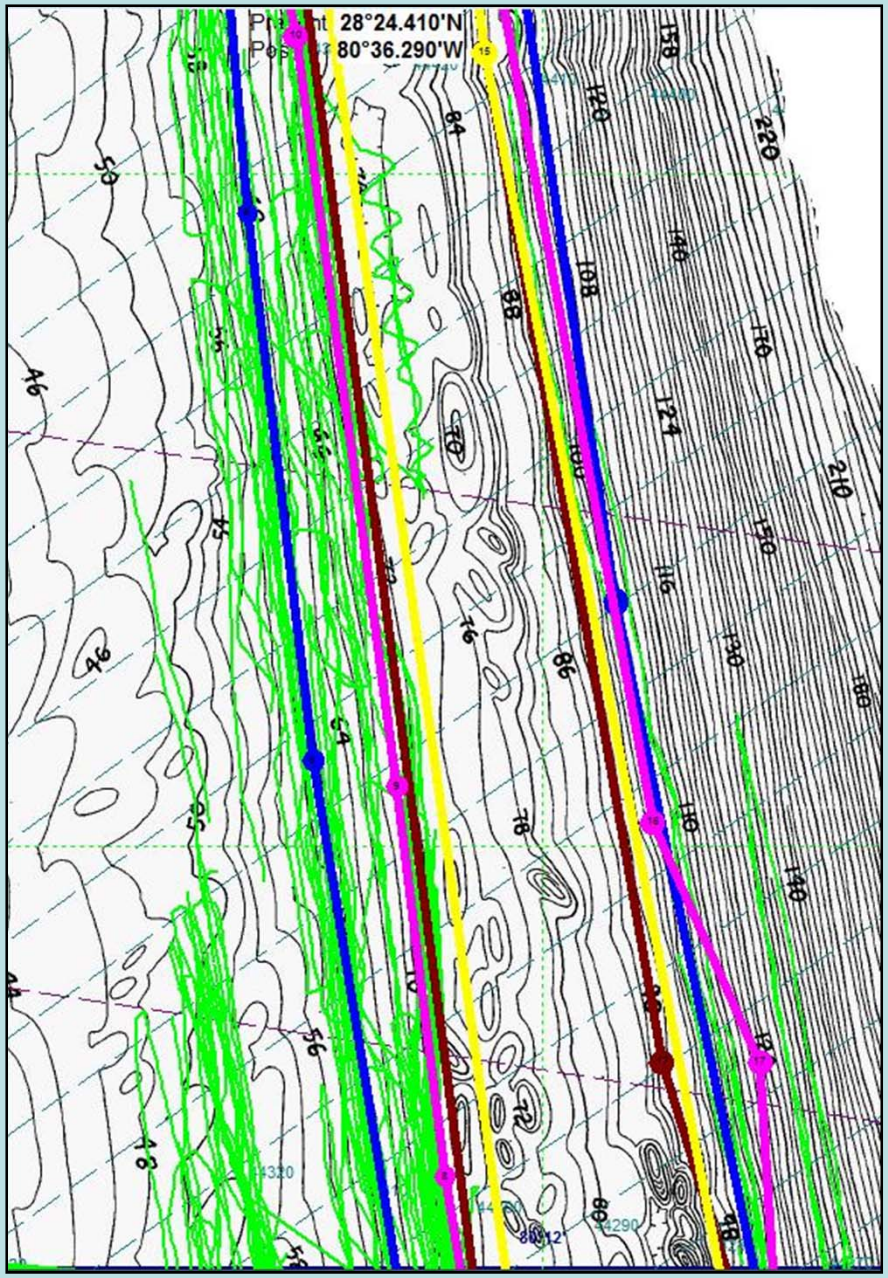
Green lines - historic Rock Shrimp trawler tracks

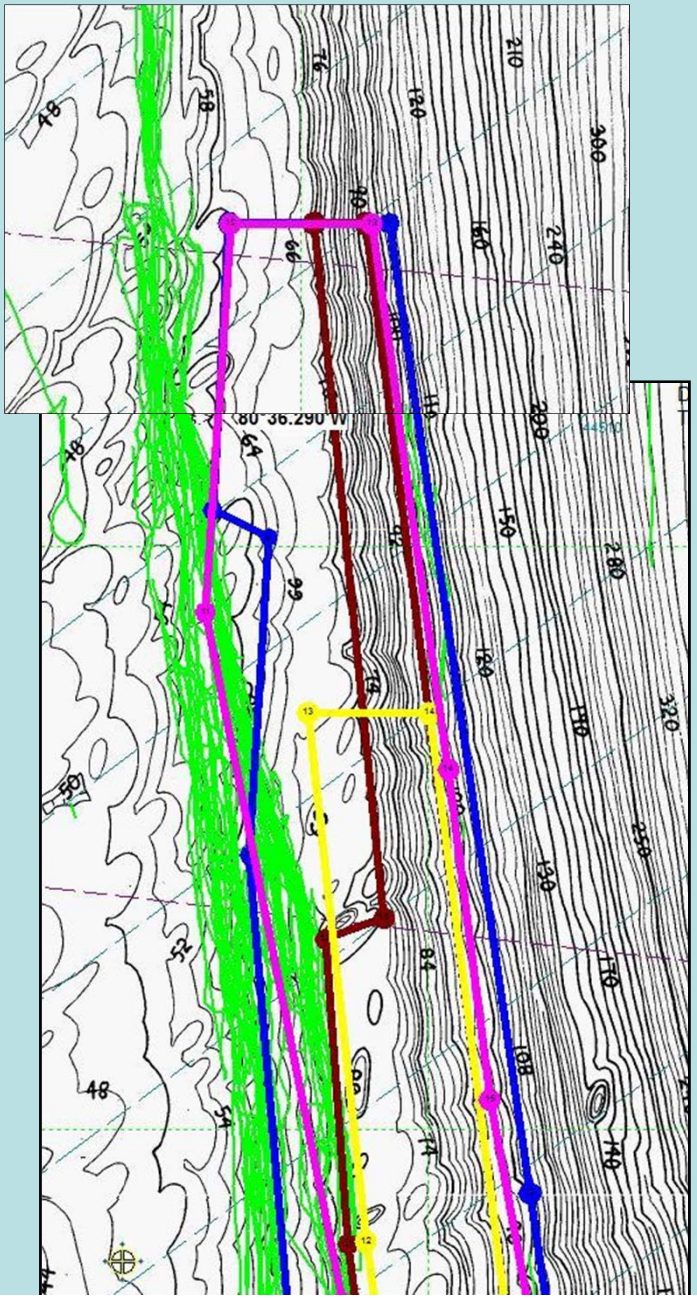
Shrimp AP's *Oculina* HAPC Alt 2b (WinPlot)





Shrimp AP's *Oculina* HAPC Alt 2b (WinPlot)



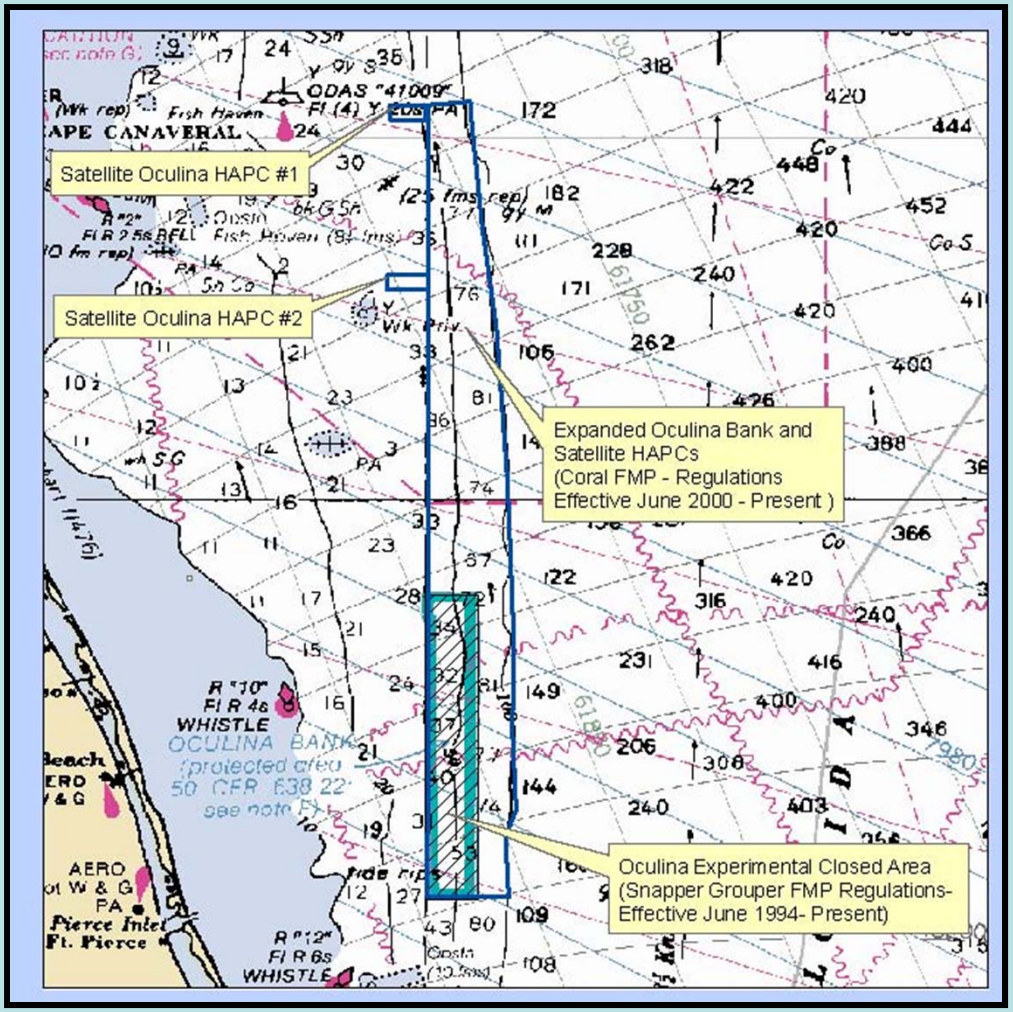


Deepwater shrimp fisheries and *Oculina* HAPC: Historical perspective

<u>*Oculina* HAPC</u> 2000 Expansion

The <u>OHAPC Expansion extended</u> offshore into <u>mud-bottom</u> (*rock shrimp fishery*) out to 100 fathoms (~700', 240m)

<u>3X deeper</u> than *Oculina* Bank depth, deep water grouper, Golden Tilefish habitat

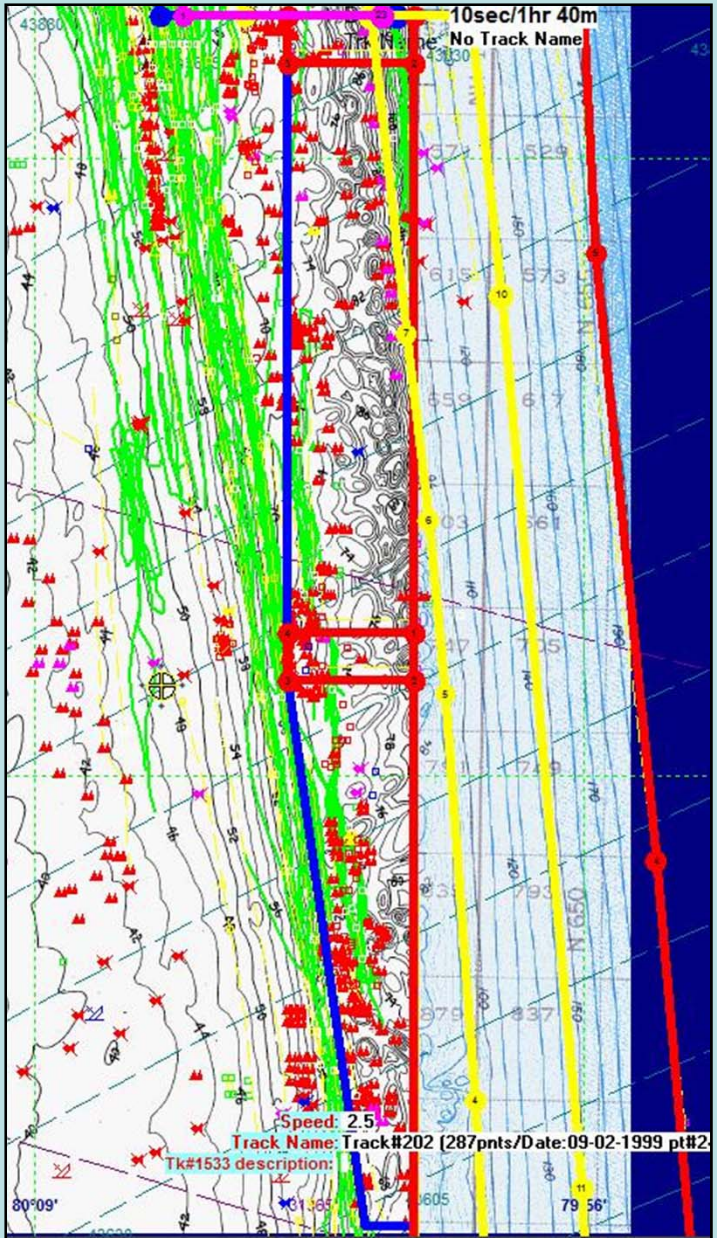


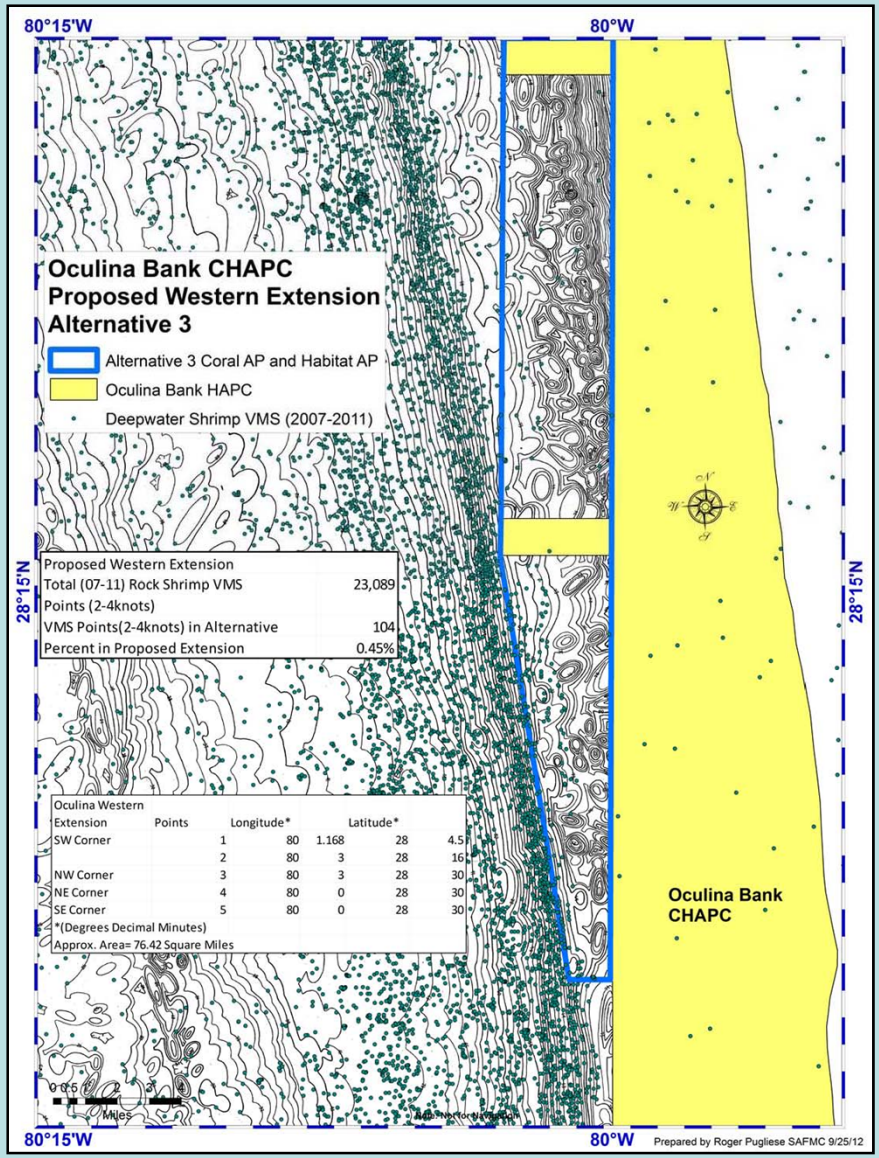
Western Expansion

Problems with SAFMC's OHAPC "<u>Western Expansion</u>" alternative

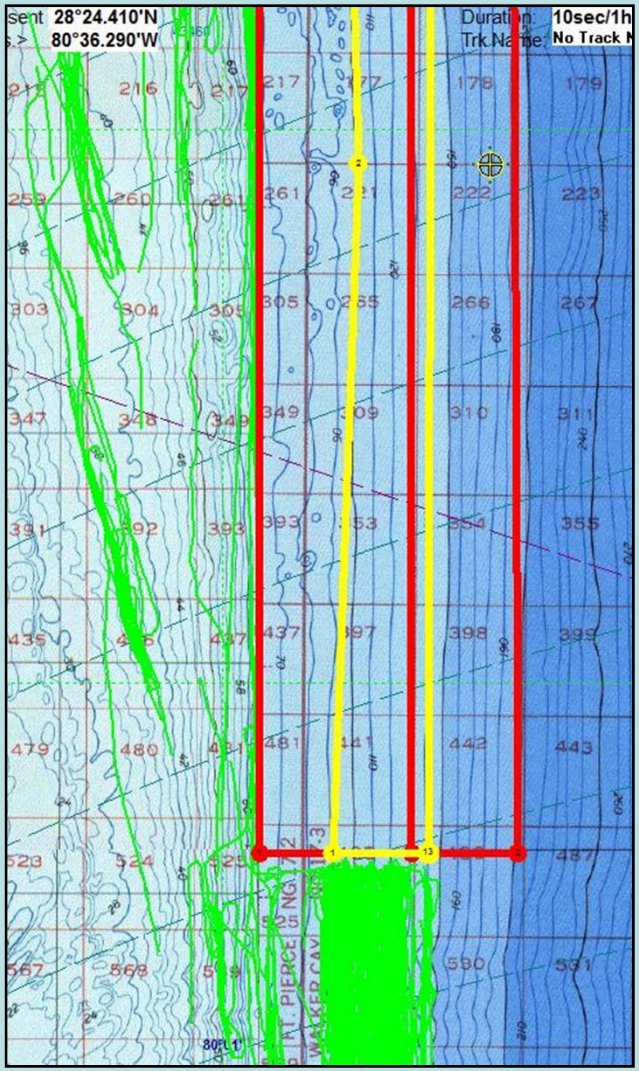
The ledge system is <u>not</u> straight north-south. The HAPC should be <u>re-adjusted</u> to cover ledge, and not cover extensive soft-bottom area.

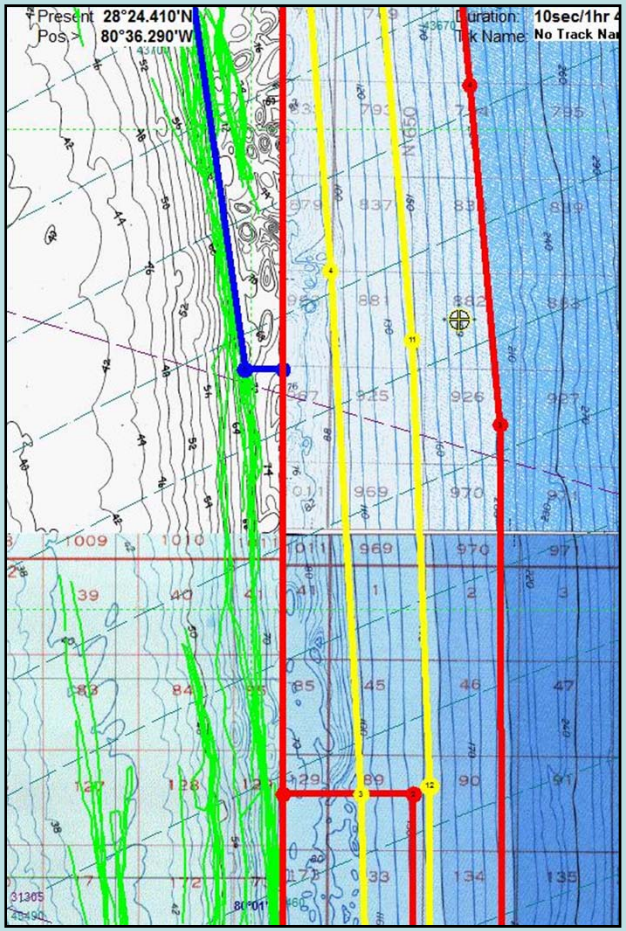
Re-alignment w/ reef-tract ?

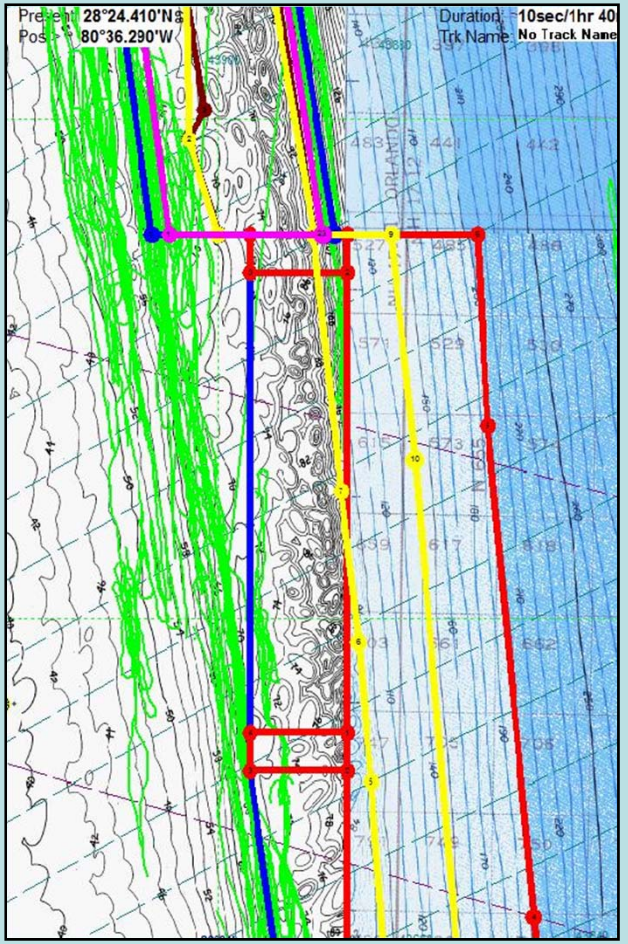




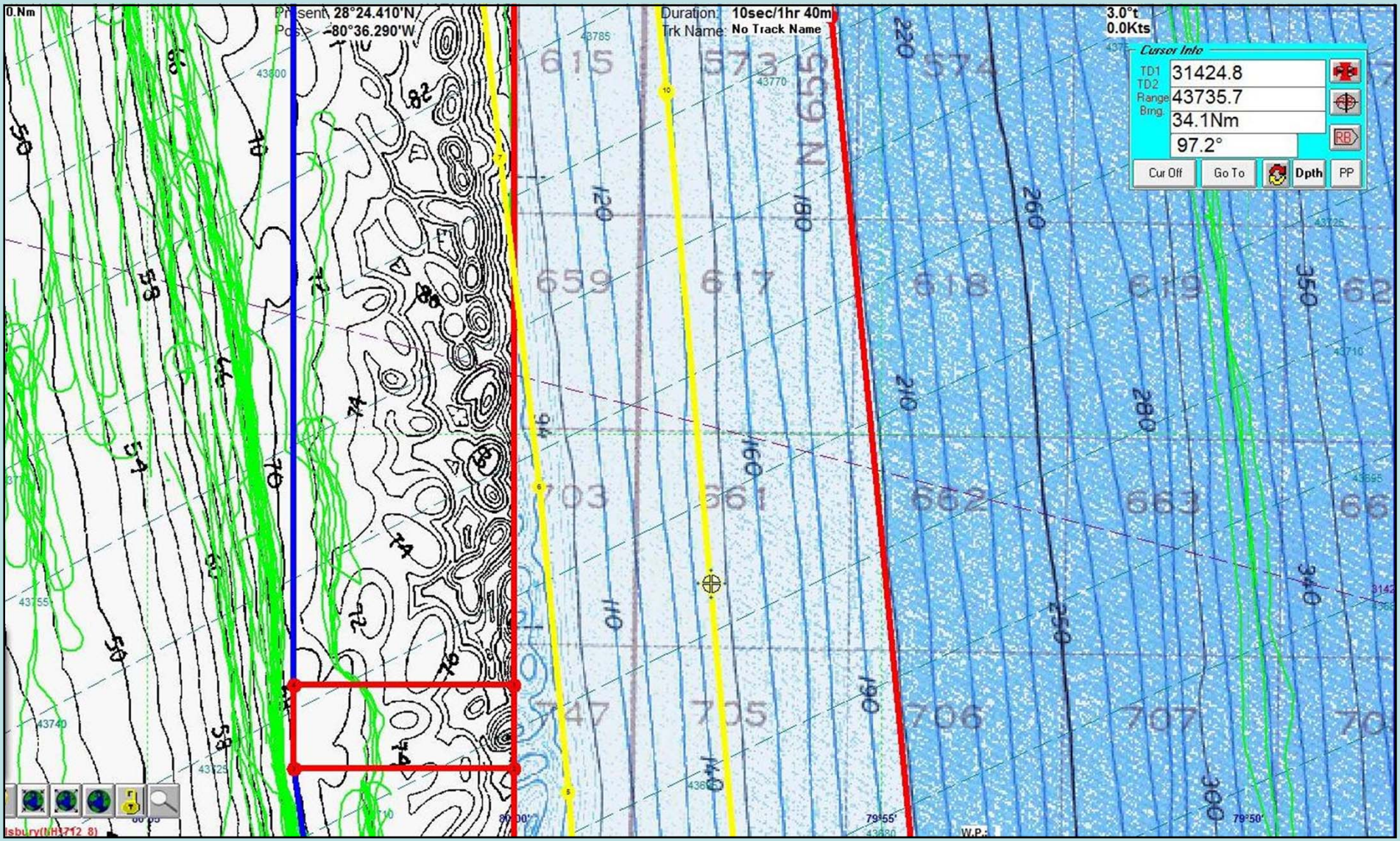
“Fishery Access Areas” in Existing OHAPC







Realignment of OHAPC- Better MPA design ?



Transit Provision

Transit Provision - Issues

Necessary for transit to Port Canaveral

Safety Issue- Shrimp vessels are more stable with booms down, doors out, nets in, stabilizers down during transit

VMS- can be used to discriminate trawling vs. transit speed (*Thrane & Thrane A/S*, see below)

4.11 SURVEILLANCE ZONES

Surveillance zones are geographical areas that can be set up on the transceiver by the system administrator. Some of the features of the transceiver can then be set to behave differently depending on which zone it is in.

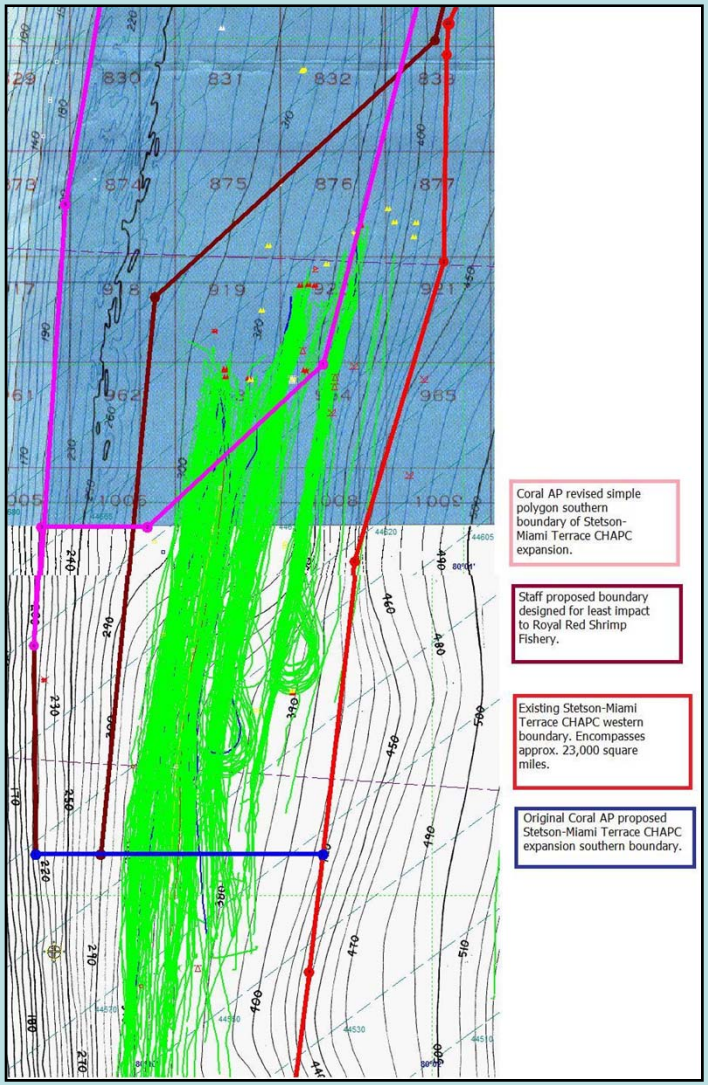
- Interval programs can be set to report at special intervals when the transceiver is inside specific zones. This may be used to increase the frequency of reports when the transceiver is near important places, or to reduce the frequency when the position of the transceiver is of less interest, e.g. a ship in port.
- Event programs can be set up to send data reports whenever the transceiver enters or leaves a zone.
- The current zone status, i.e. the zone that the transceiver is currently inside, can be read by external equipment through the terminal interface, thereby enabling this equipment to take advantage of the advanced geographical positioning features.

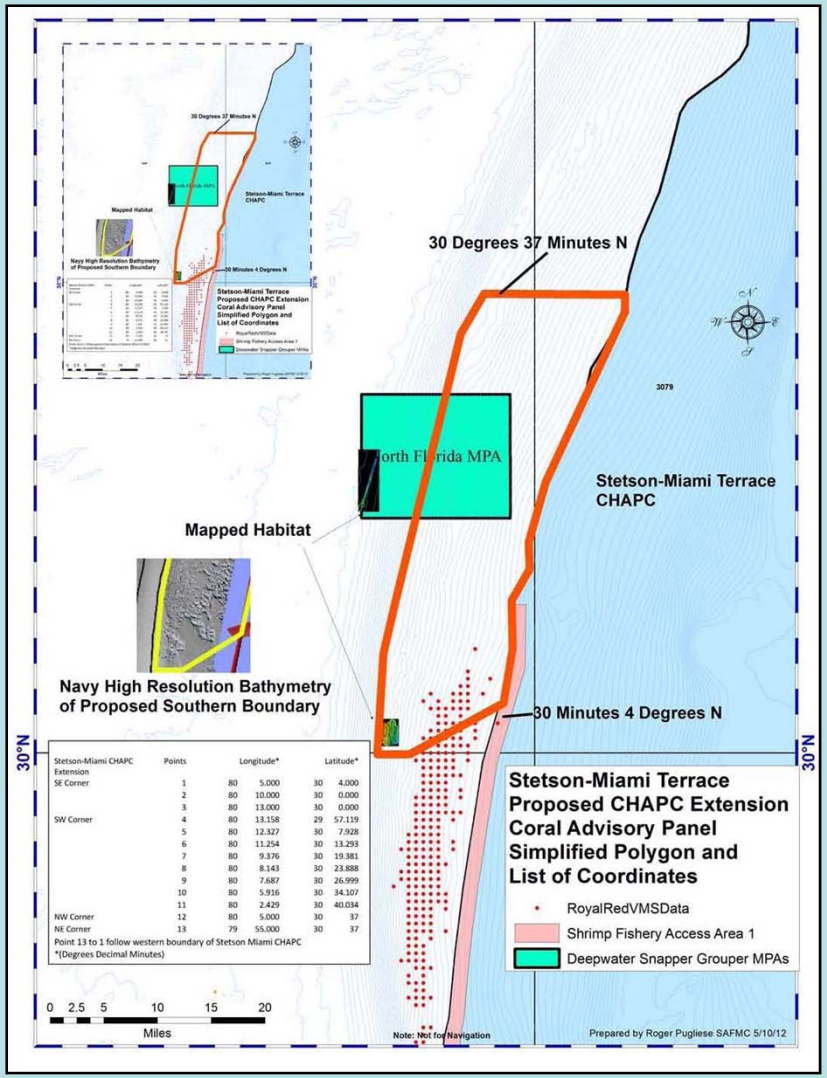
Stetson-Miami Terrace

Deepwater shrimp fisheries CHAPC:

CE-BA-1 : <u>Shrimp Fishery Access Areas</u>

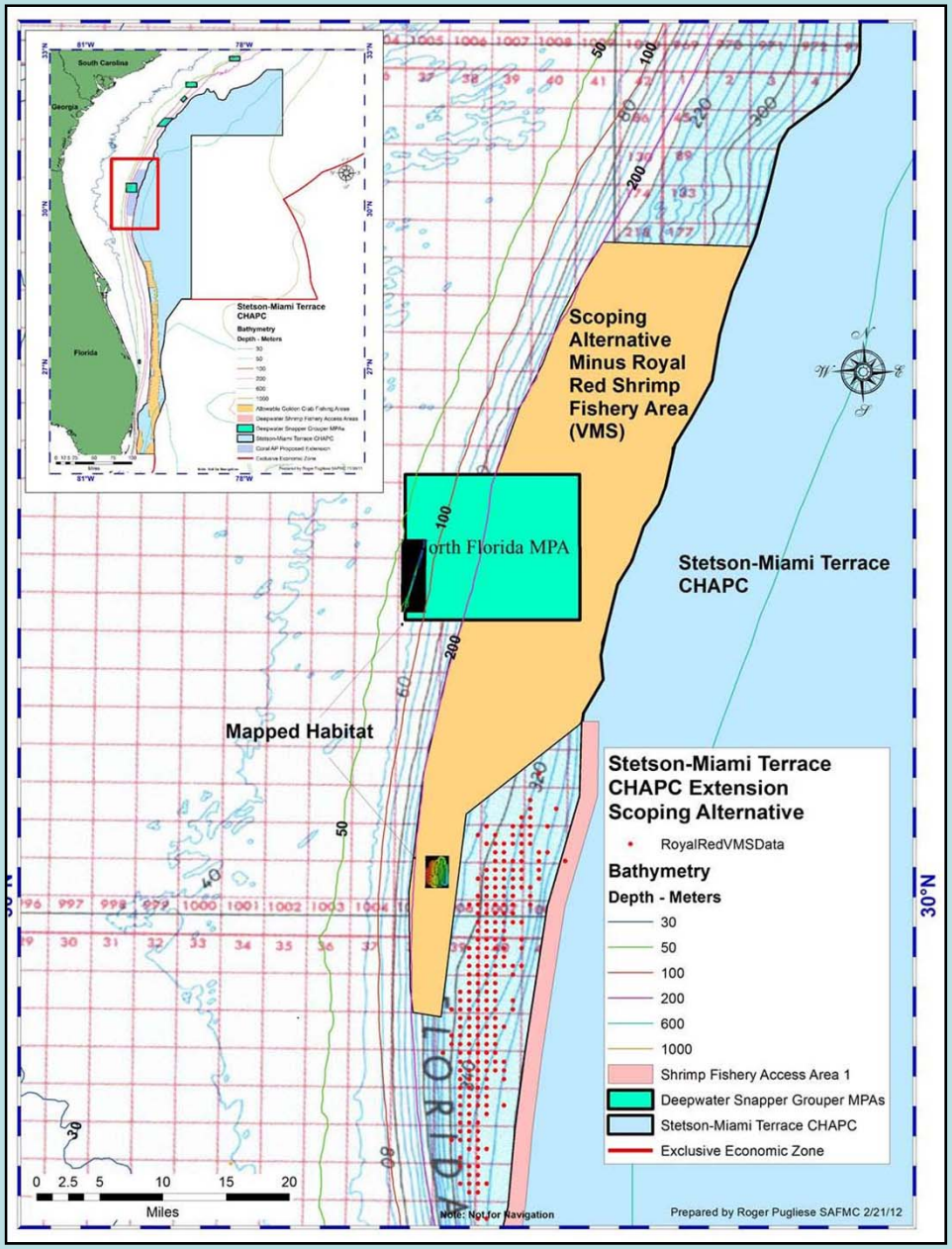
Stetson-Miami Terrace Shrimp trawling accommodated





Shrimp AP- Stetson-Miami Terrace preferred Alt. 3

Retains existing historic Royal Red shrimp fishery, contiguous with “Shrimp Fishery Access Area” from original SMT CHAPC



Questions ?