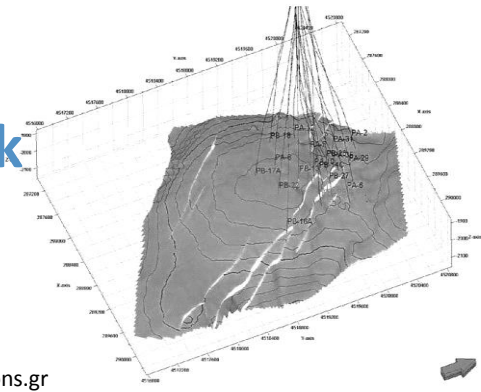





October, 31<sup>st</sup> 2018

# Offshore western Greece: How the geological framework impacts the Hydrocarbon prospectivity



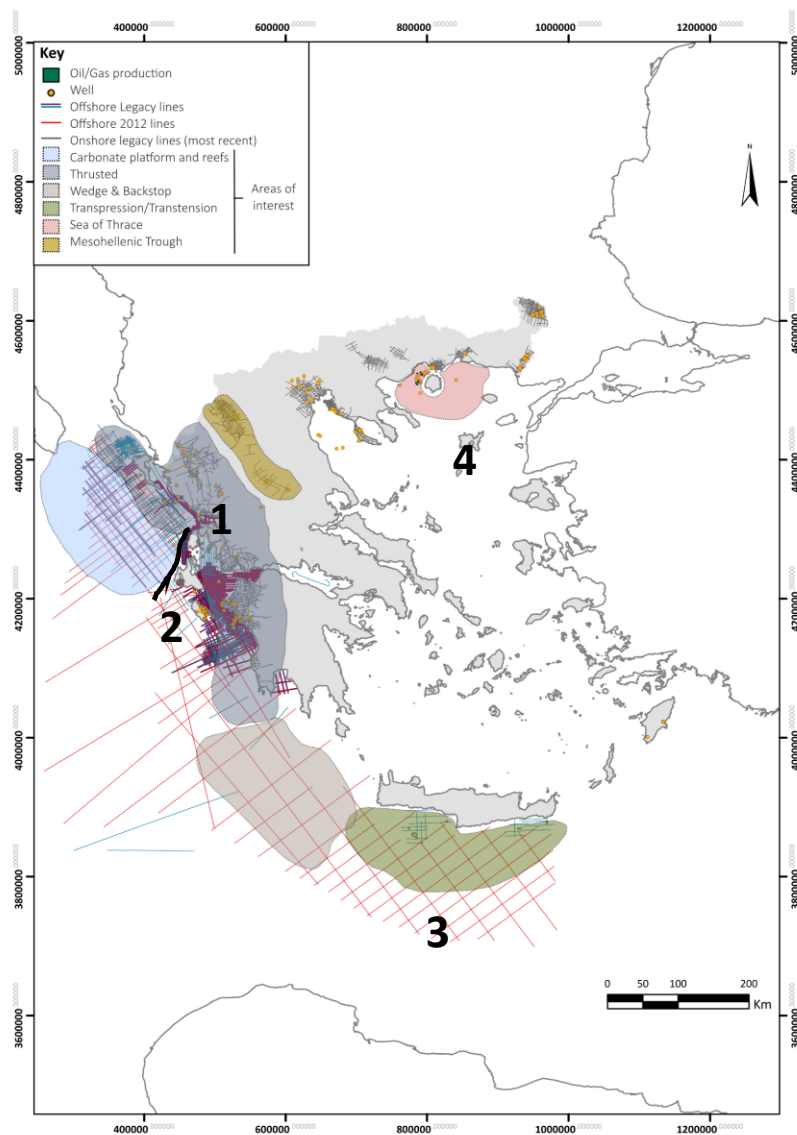
 [www.greekhydrocarbons.gr](http://www.greekhydrocarbons.gr)

Spyros Bellas<sup>1</sup>, Vasiliki Kosmidou<sup>2</sup>

- 1. Vice President HHRM SA
- 2. Geoscientist HHRM SA

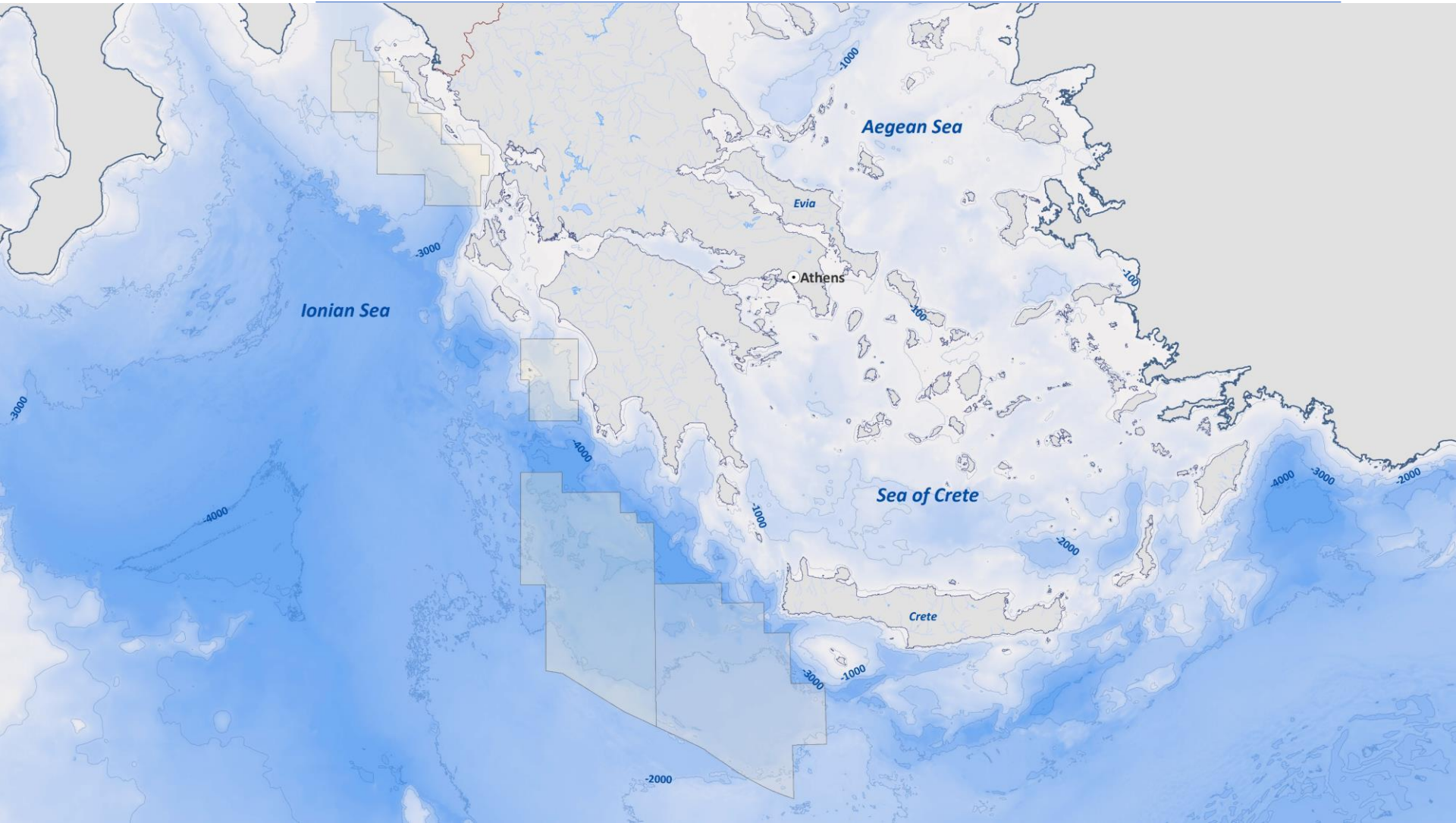


# Greece and hydrocarbons: Principle Tectonic settings

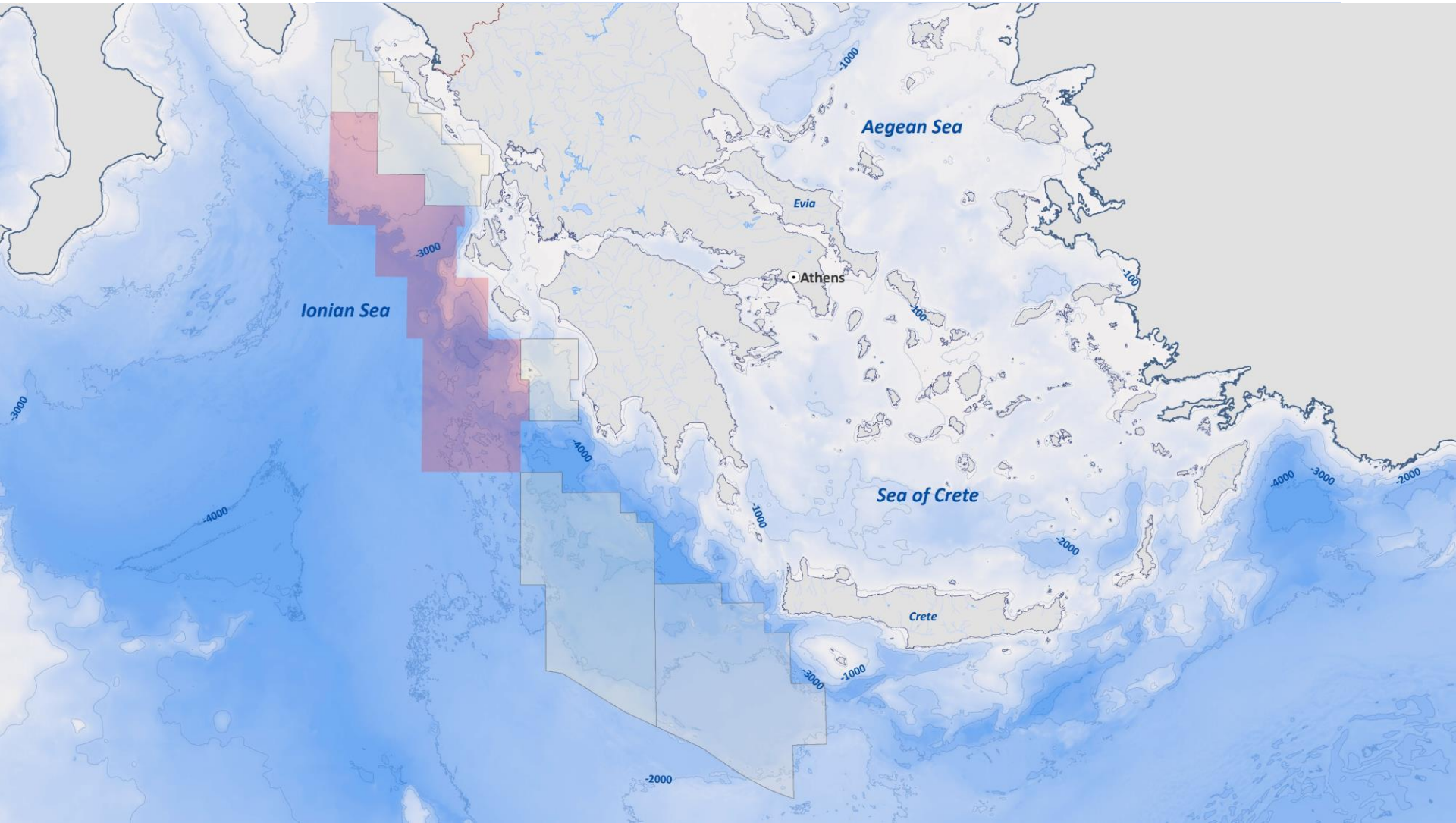


1. The active Fold & Thrust Belt (Hellenides FTB)
2. Kefalonia Fault
3. Africa slab subduction (Aegean island Arc)
4. NAF

# Offshore Western Greece : Awarded blocks



# Future Offshore E&P Opportunities: Concept Areas



# Offshore Western Greece: Challenges vs Advantages

## Main challenges

- Frontier areas
- Sea-water depths
- Structural complexity
- Potential source rock (H/C)
- Environmentally protected sectors & tourism

## Main advantages

- Adjacent discoveries and analogues
- H/C wells to the east
- Size: Large concept blocks to explore
- Support Framework
- Our experience
- Knowledge from awarded blocks

# Offshore Central Ionian-Western Peloponnese: Seismic coverage and wells

## Northern part

Conditioned: 578 km

Reprocessed: 833 km

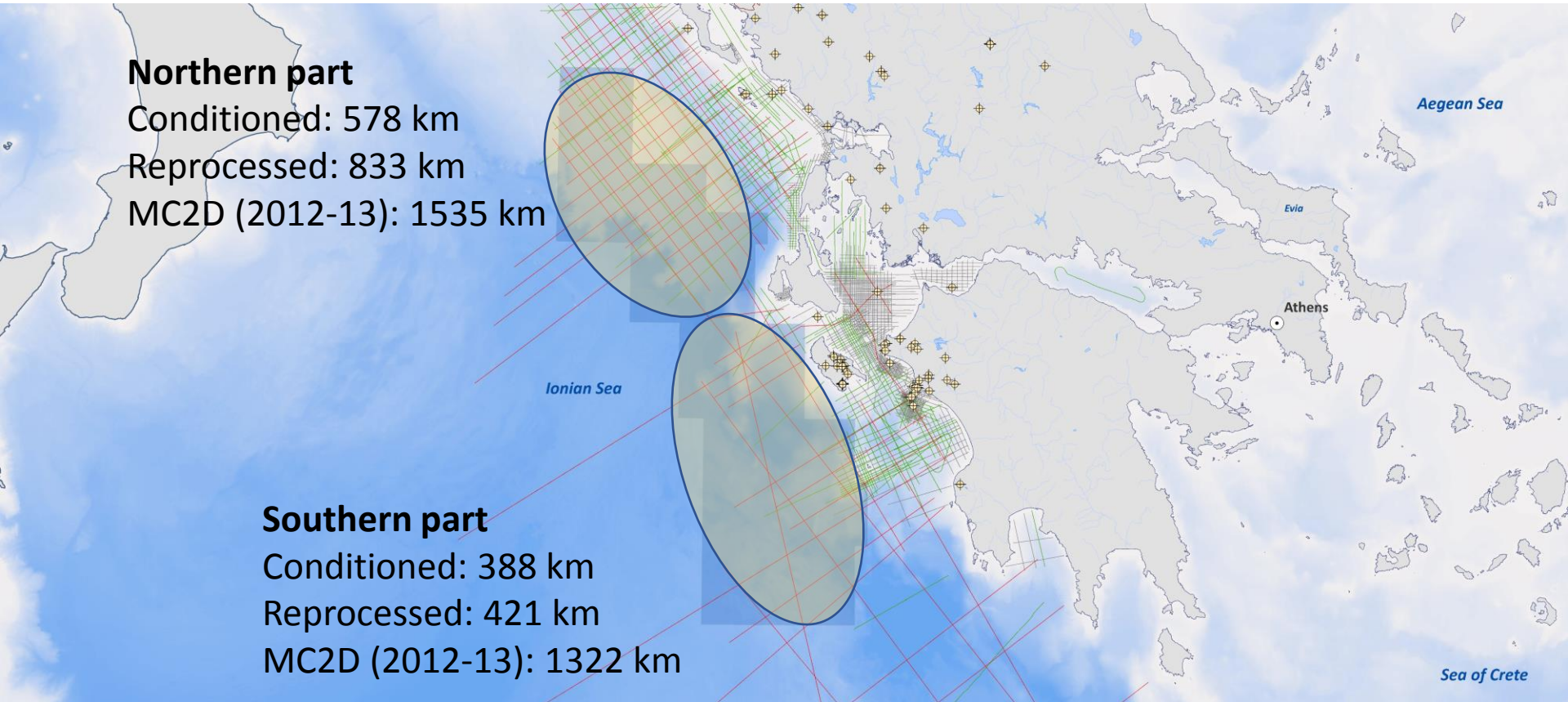
MC2D (2012-13): 1535 km

## Southern part

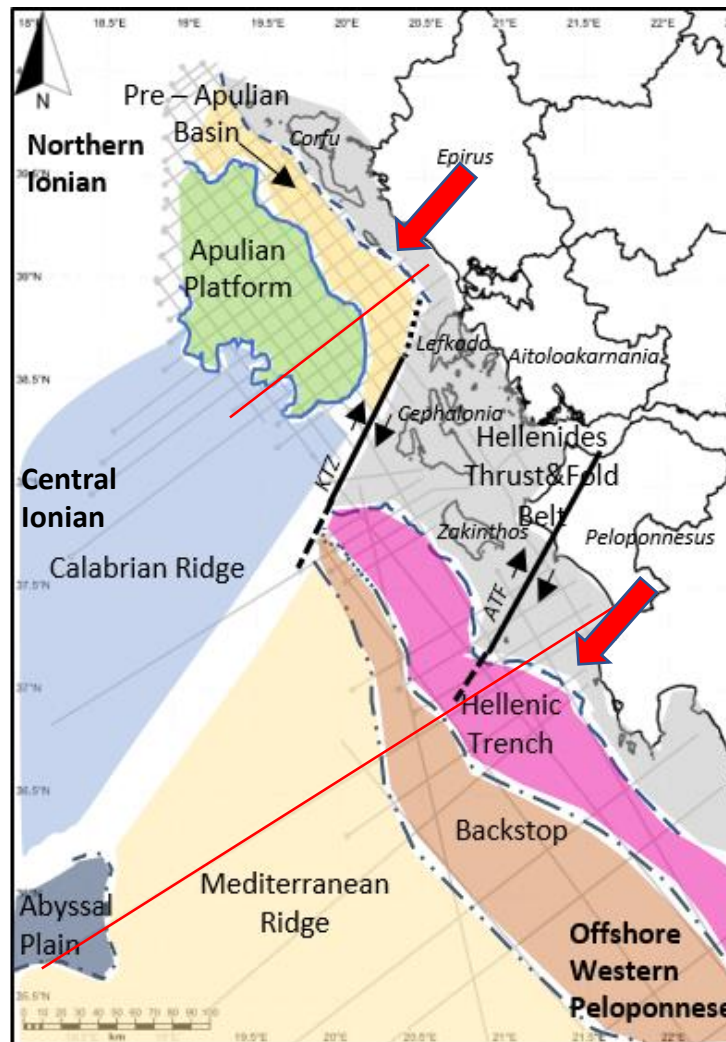
Conditioned: 388 km

Reprocessed: 421 km

MC2D (2012-13): 1322 km



## Tectonic setting : Central Ionian Sea



**Red lines:** seismic to be presented

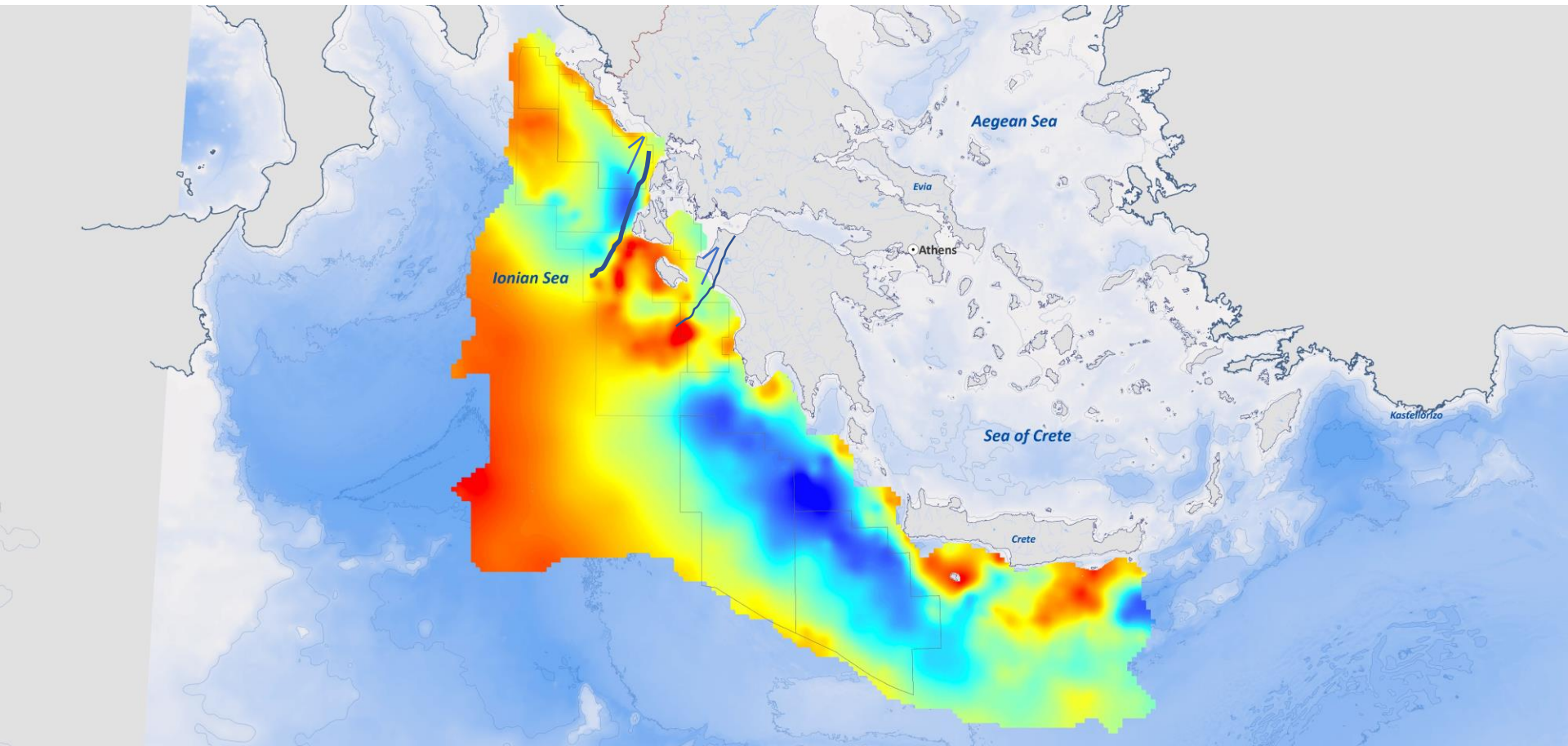
## Concept central Ionian

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- The combination of KTF, ATF and the TFB structurally controls the area
- Two different geological systems (settings) can be distinguished N and S of the KTF
- Clear Differentiation of Bouguer and free air-gravity between the two sectors also indicates the increased structural complexity to the south
- Increased deformation to the South (both in Meso- & Cenozoic)
- Sedimentary environments:
  - Apulian undeformed carbonate platform vs deformed carbonate Formations to the South
  - Stratigraphic traps to the north vs structural & stratigr. to the south
  - Adequate Messinian seal to the South vs Messinian Evaporites absence to the north



# Central Ionian: Free-Air Gravity

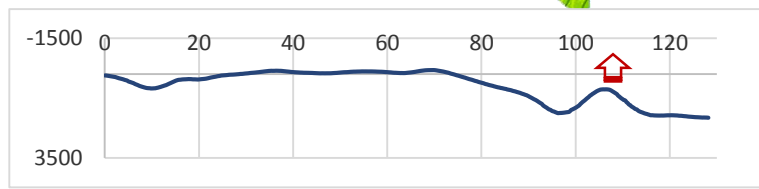
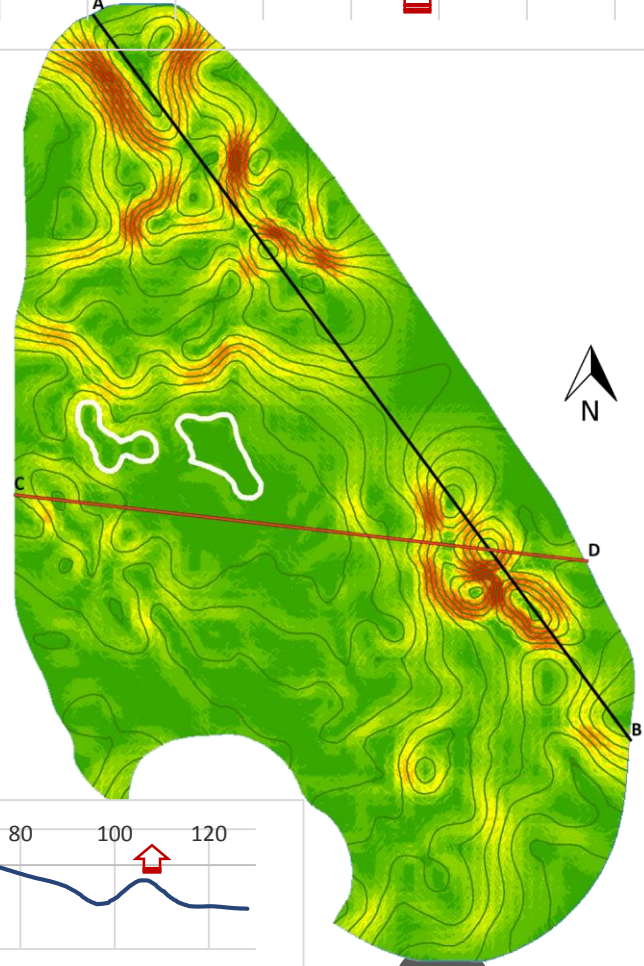
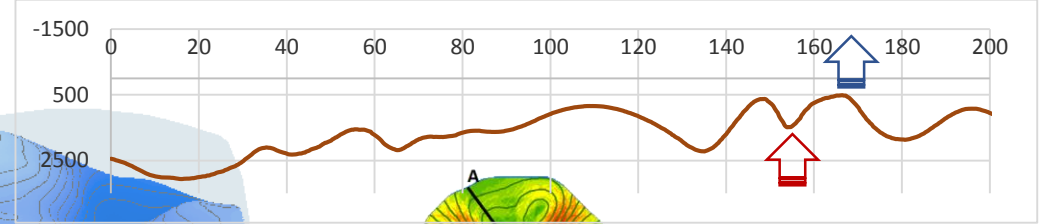


# Northern of KTF: Cretaceous

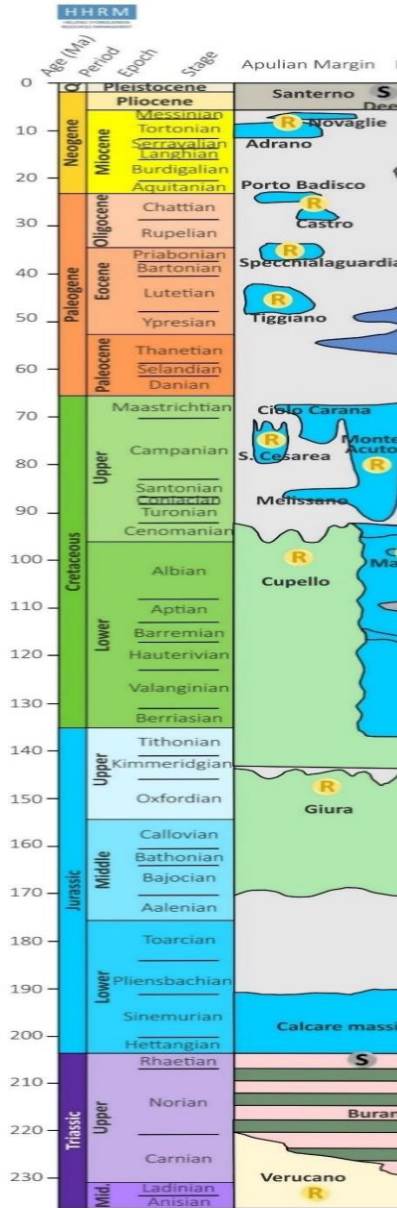
Cretaceous: Extensive platform development



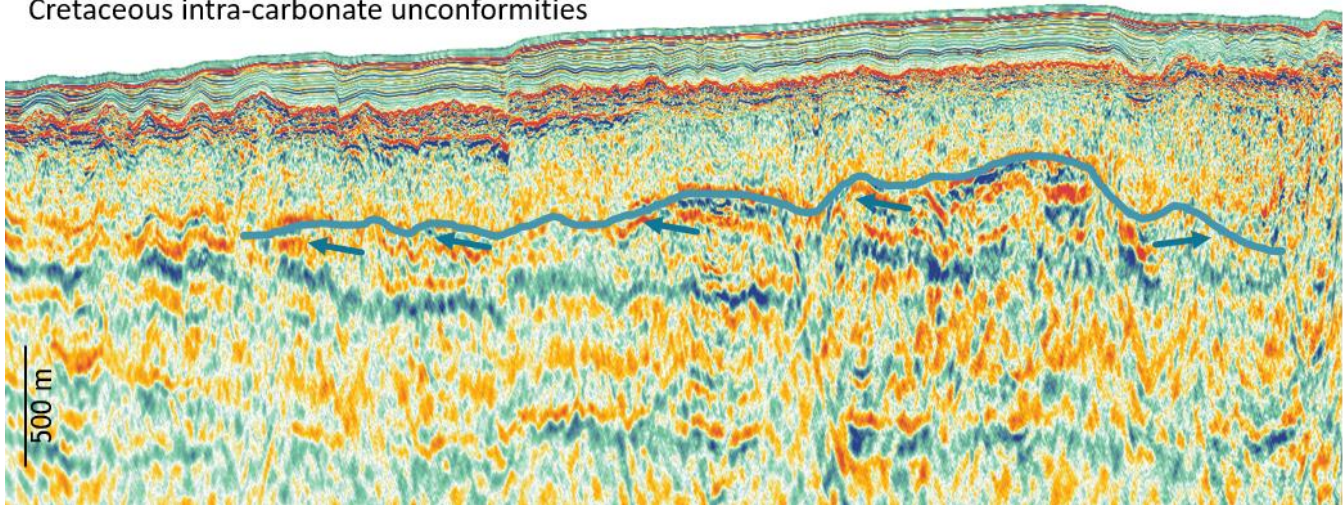
Isolated build-ups



# Northern of KTF: Apulian Platform: Seismic character



Cretaceous intra-carbonate unconformities

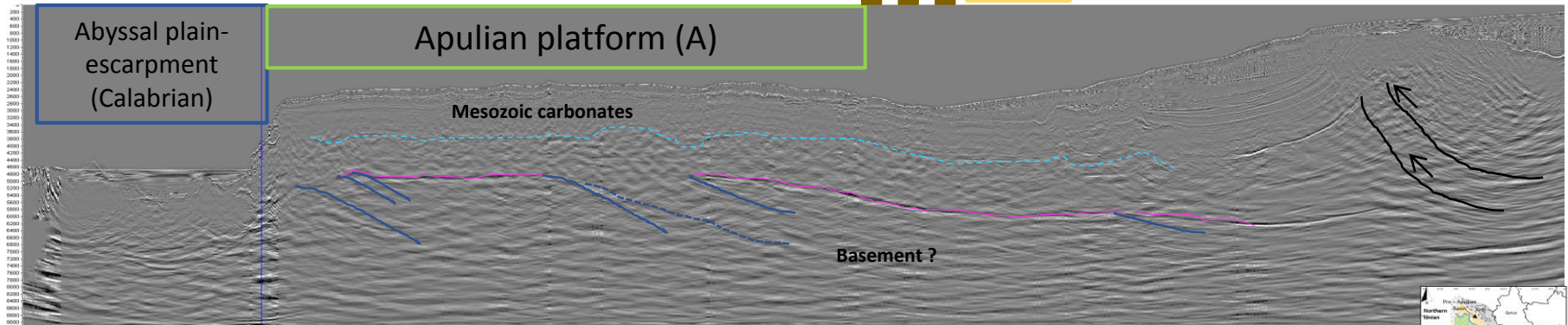


Truncations on intra-cretaceous unconformity

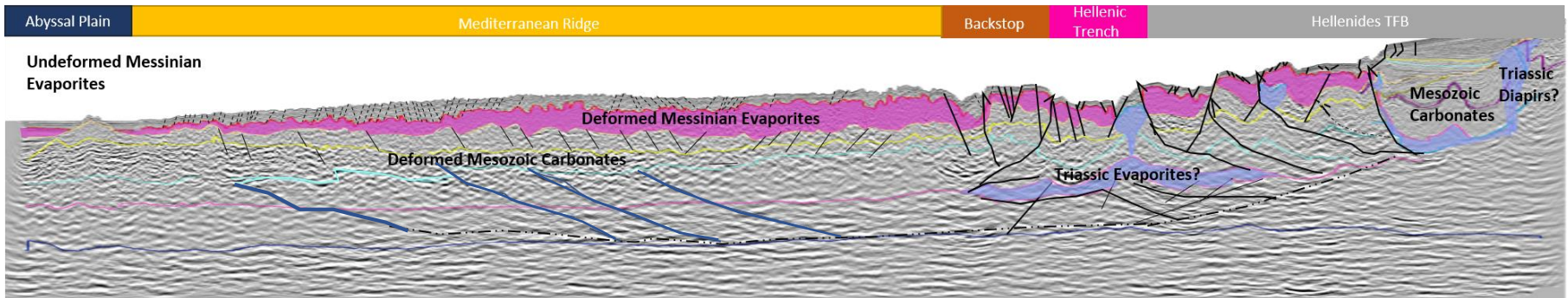
**Available acreage for express of Interest via HHRM data room visit**

# Offshore Western Greece: The current study

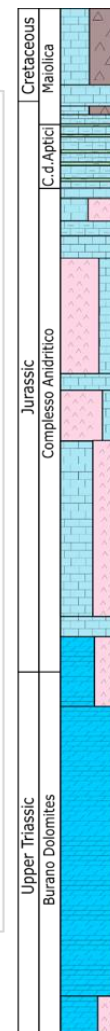
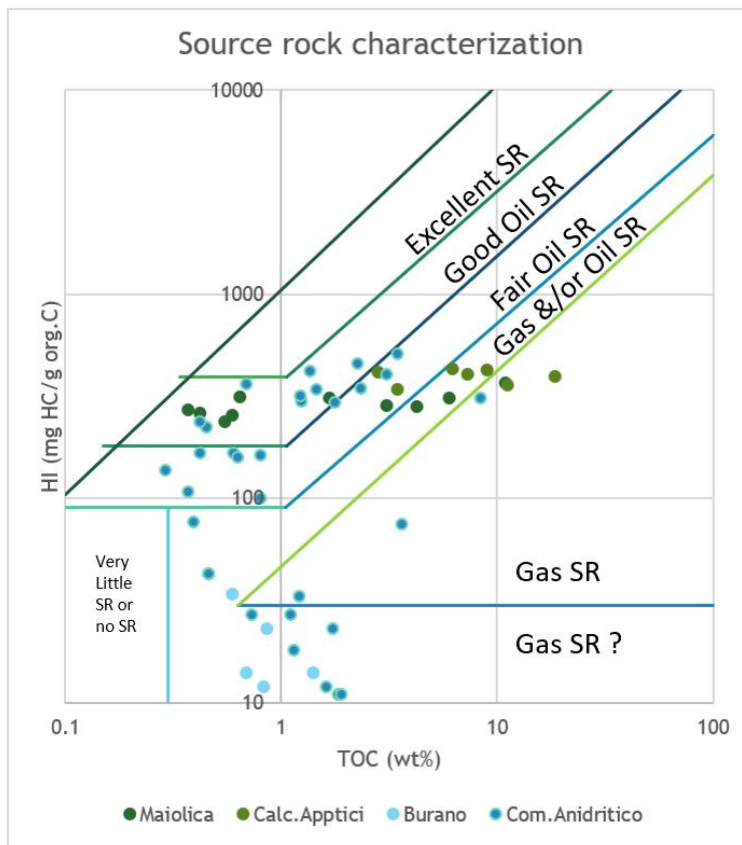
## North of KTF



## South of KTF



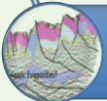
# Source rocks: North Ionian



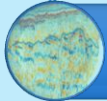
## Summarizing: Hydrocarbons prospecting offshore western Greece



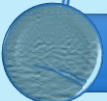
Western Hellenic napes in the south-east, with known hydrocarbon potential, may extend further to the west than currently believed.



Evaporitic packages with Mesozoic carbonates may be a key play in offshore Peloponnese



Intra platform plays are well developed in the Apulian Platform (*i.e.* in Cretaceous)



Faulted blocks at the base of the platform may provide good but deep traps



Mature source rocks have been proven in the northern part

Thank you