

# Beyond the search for hydrocarbons in Greece

*Hellenic Hydrocarbon Resources Management SA*

*Yannis Bassias, President and CEO*

**EPOCH 2019**

EXPLORATION AND PRODUCTION  
OFFSHORE CONGRESS HUB



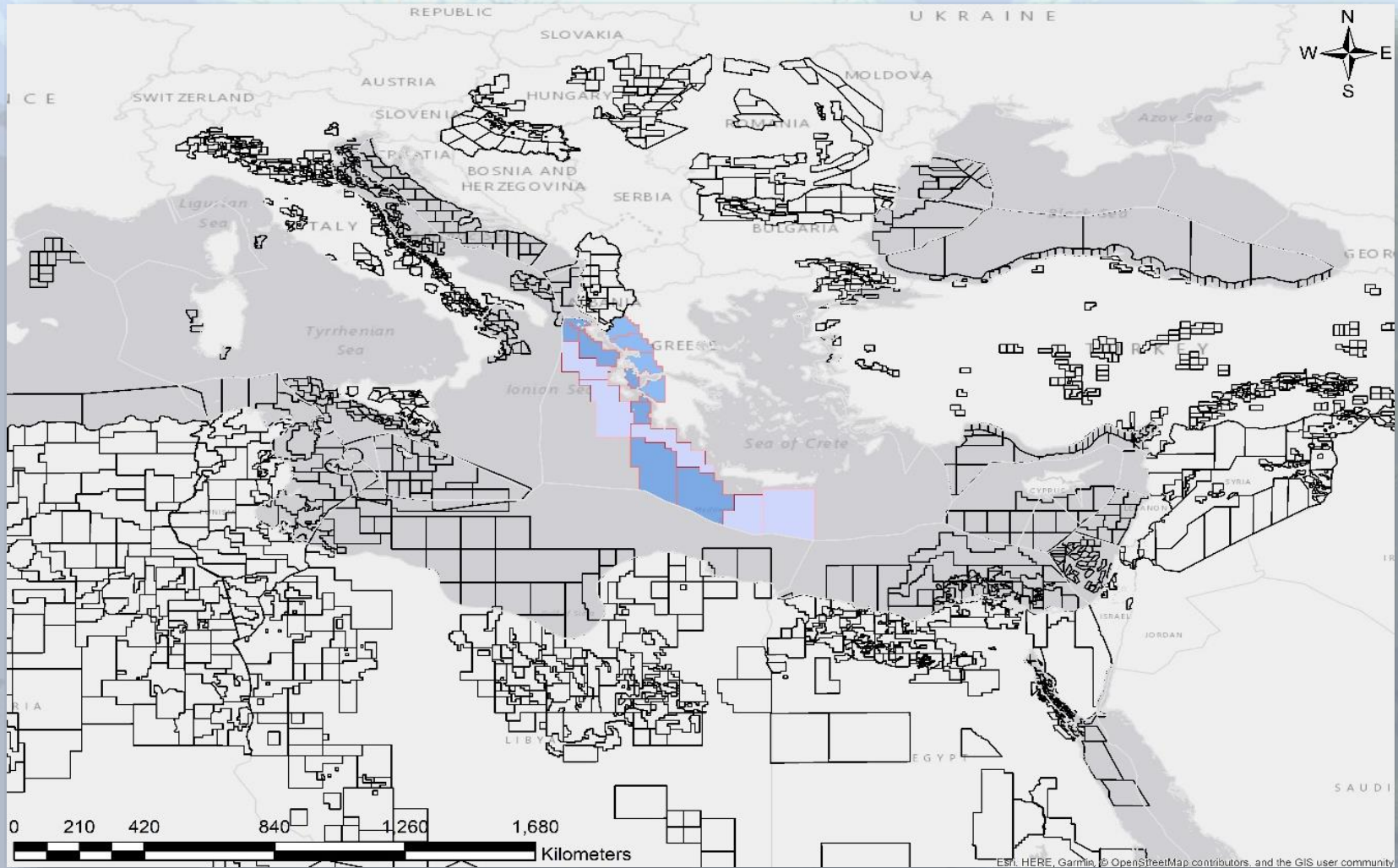
Bringing  
Goals to Solutions

Oil series

September 16-17, 2019  
Greece, Thessaloniki

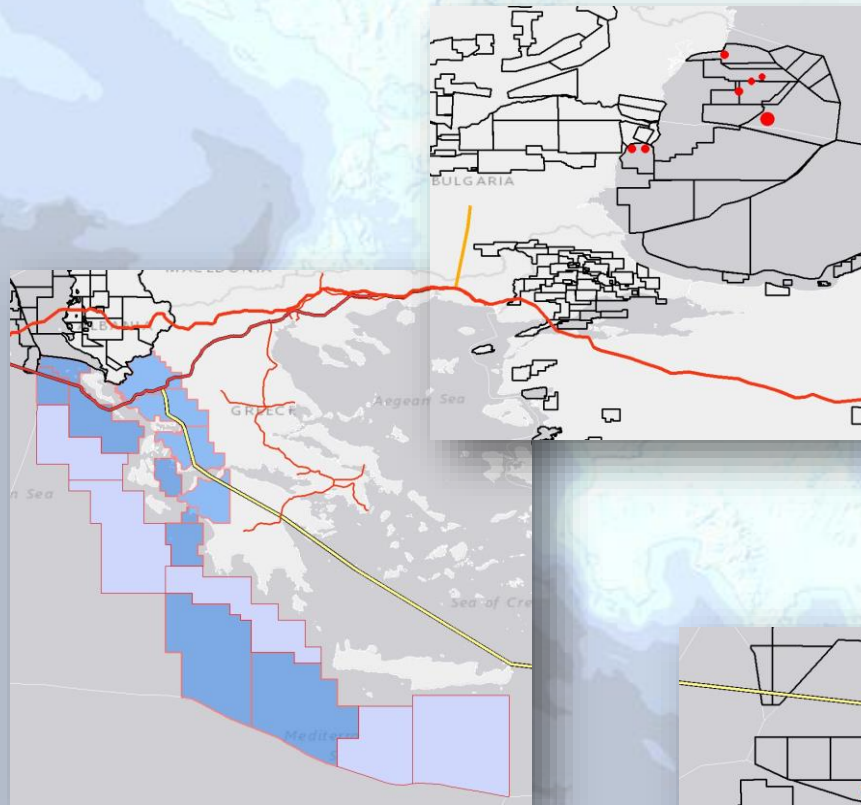


# Greece in the Eastern Mediterranean

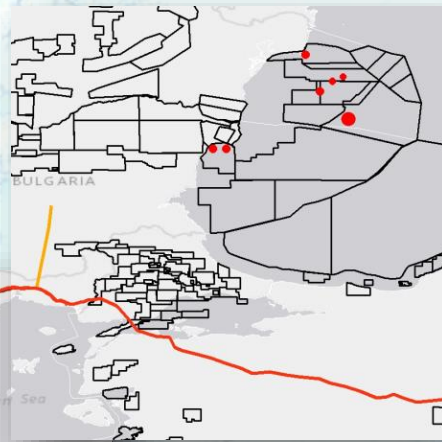


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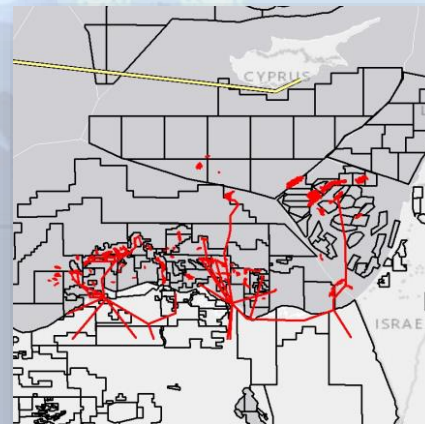
# The gas tiles of Eastern Mediterranean and Black Sea



Expected gas discoveries

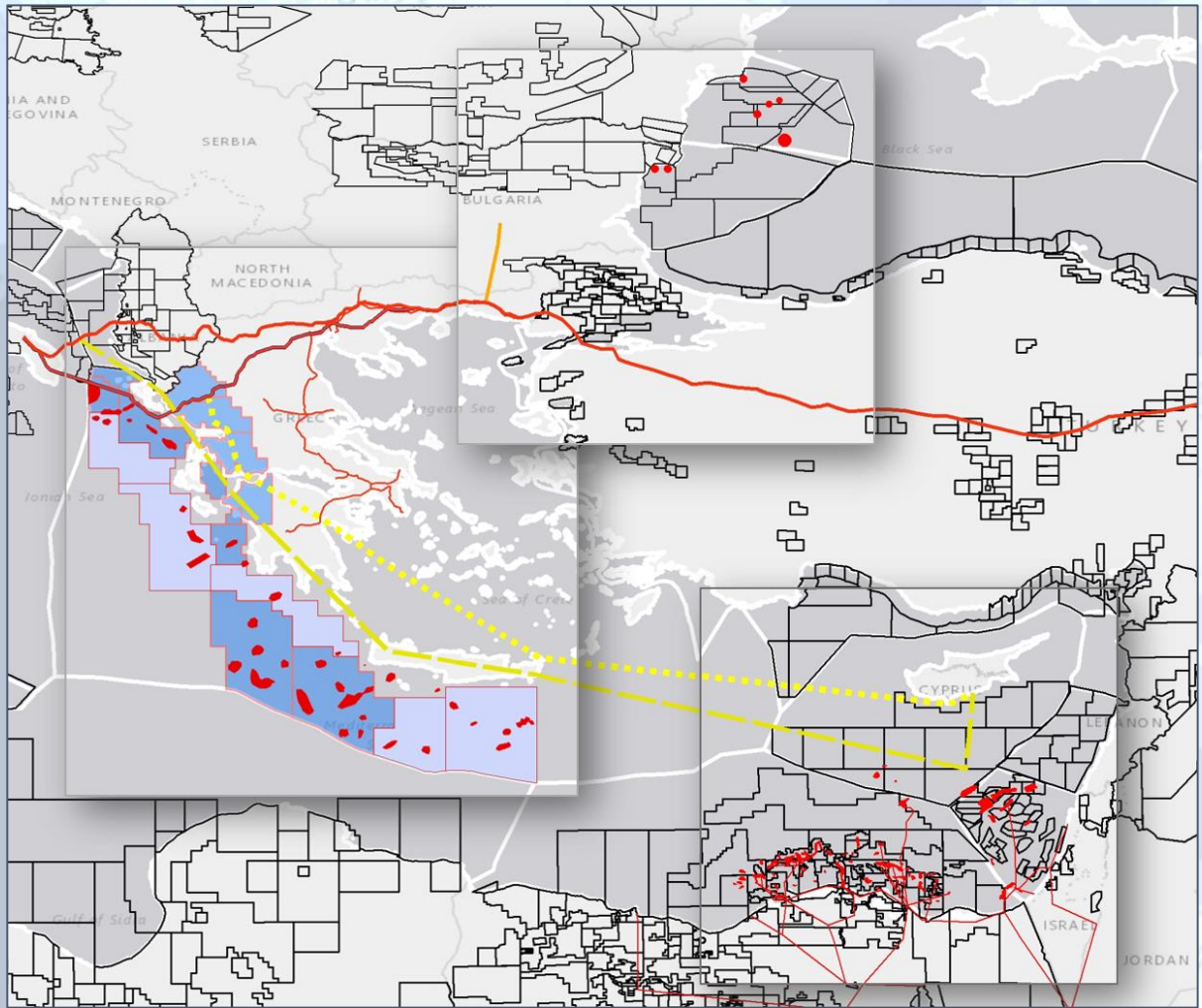


Recent gas discoveries



Recent gas discoveries and gas production

Nile delta



Fields discovered

Fields Discovered and Producing

Prospects to be explored

## **Convergence of five technical and economic reasons**

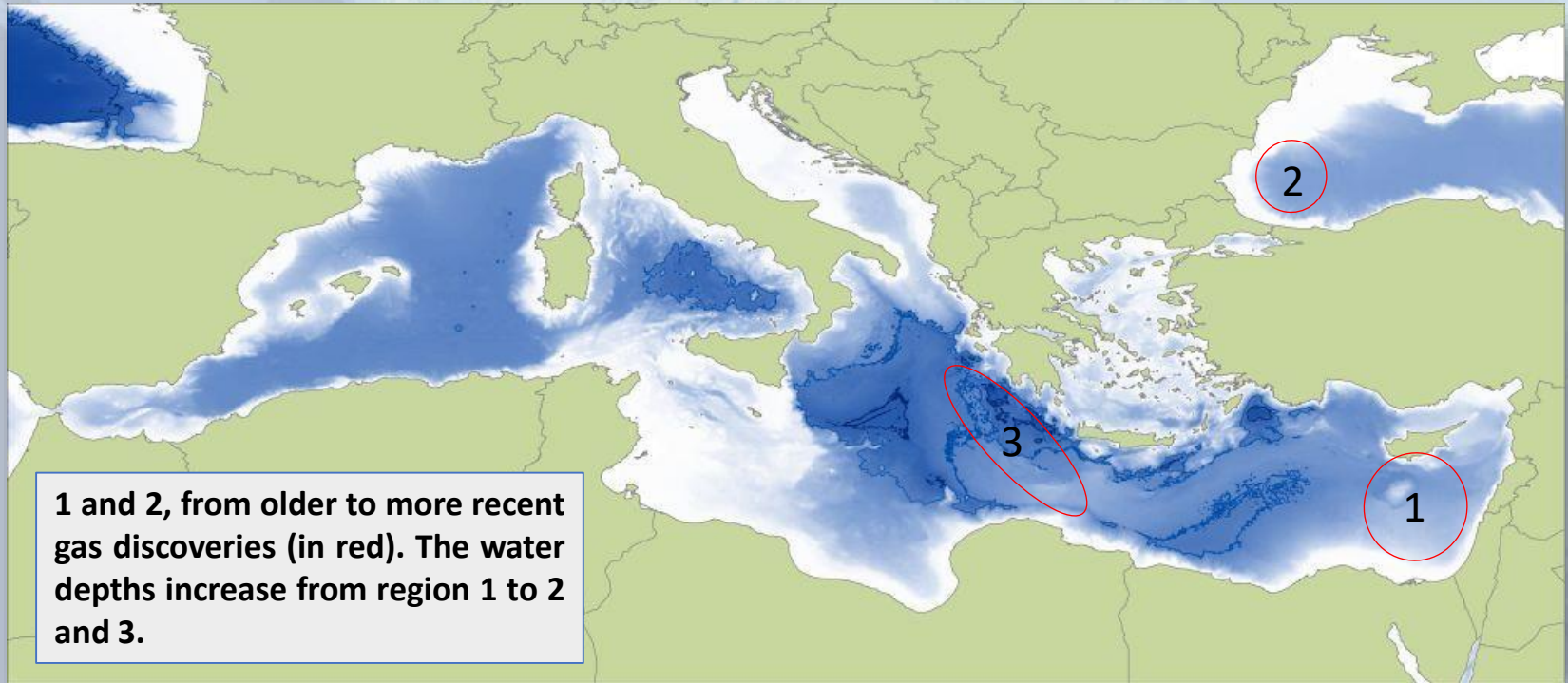
**Recent large discoveries of gas in the SE Mediterranean and Black Sea**

**New geological concept model added since 2015 in the Mediterranean**

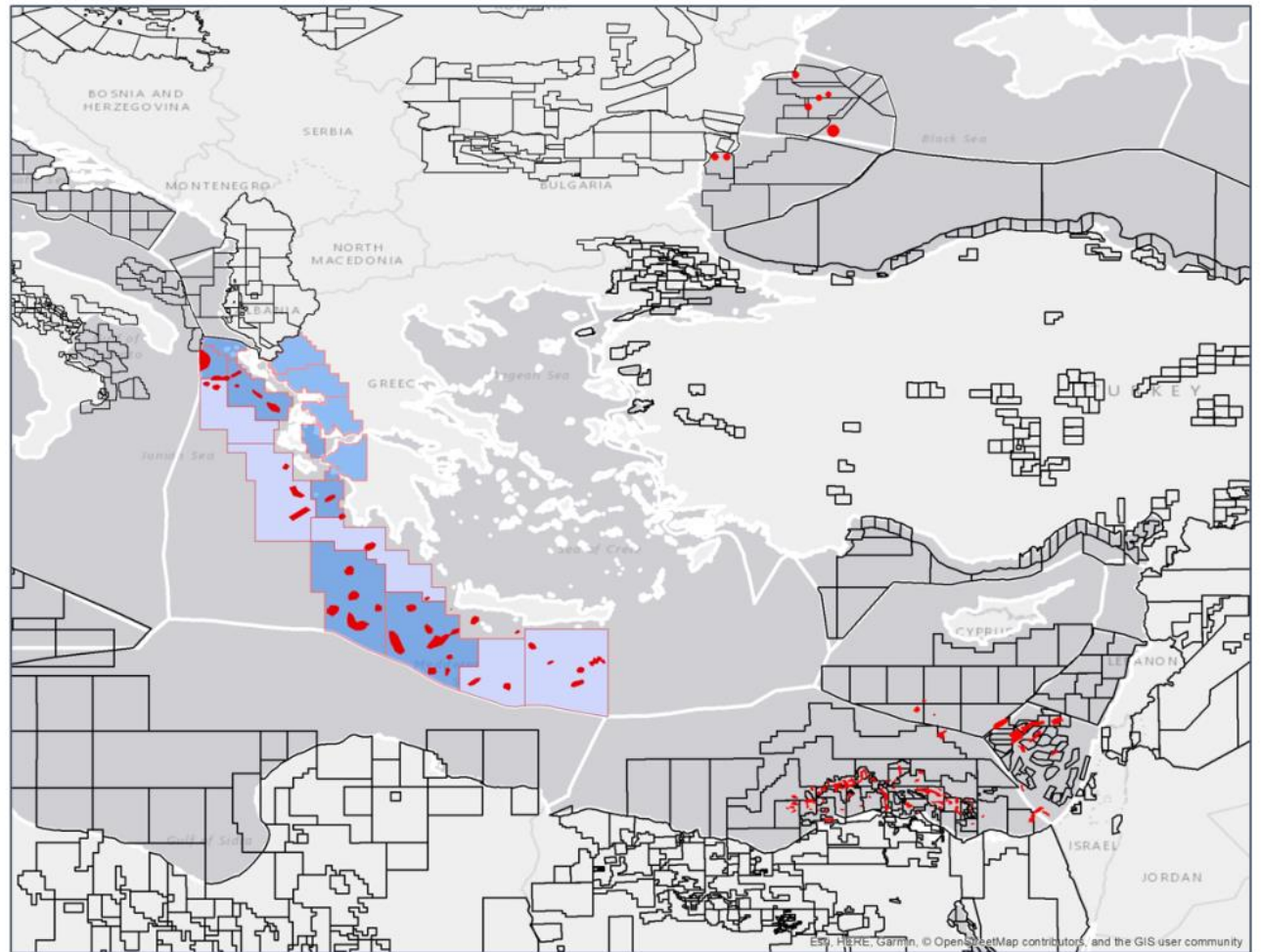
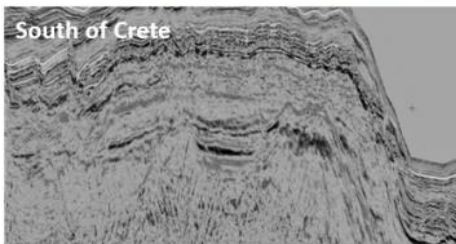
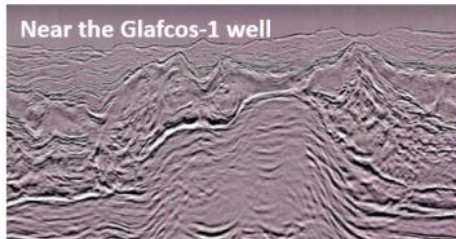
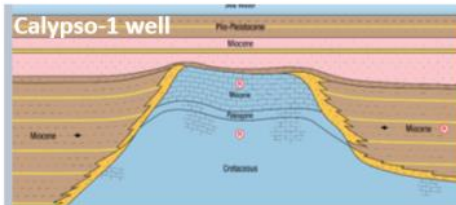
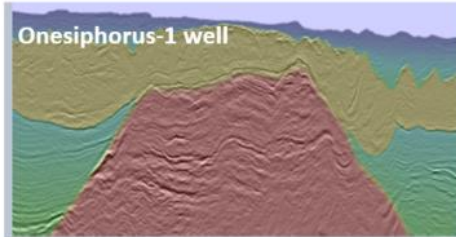
**Progressive improvement of deep and ultra-deep drilling technologies**

**Increasing commercial importance of natural gas**

**Diversification of gas supply for the European market**

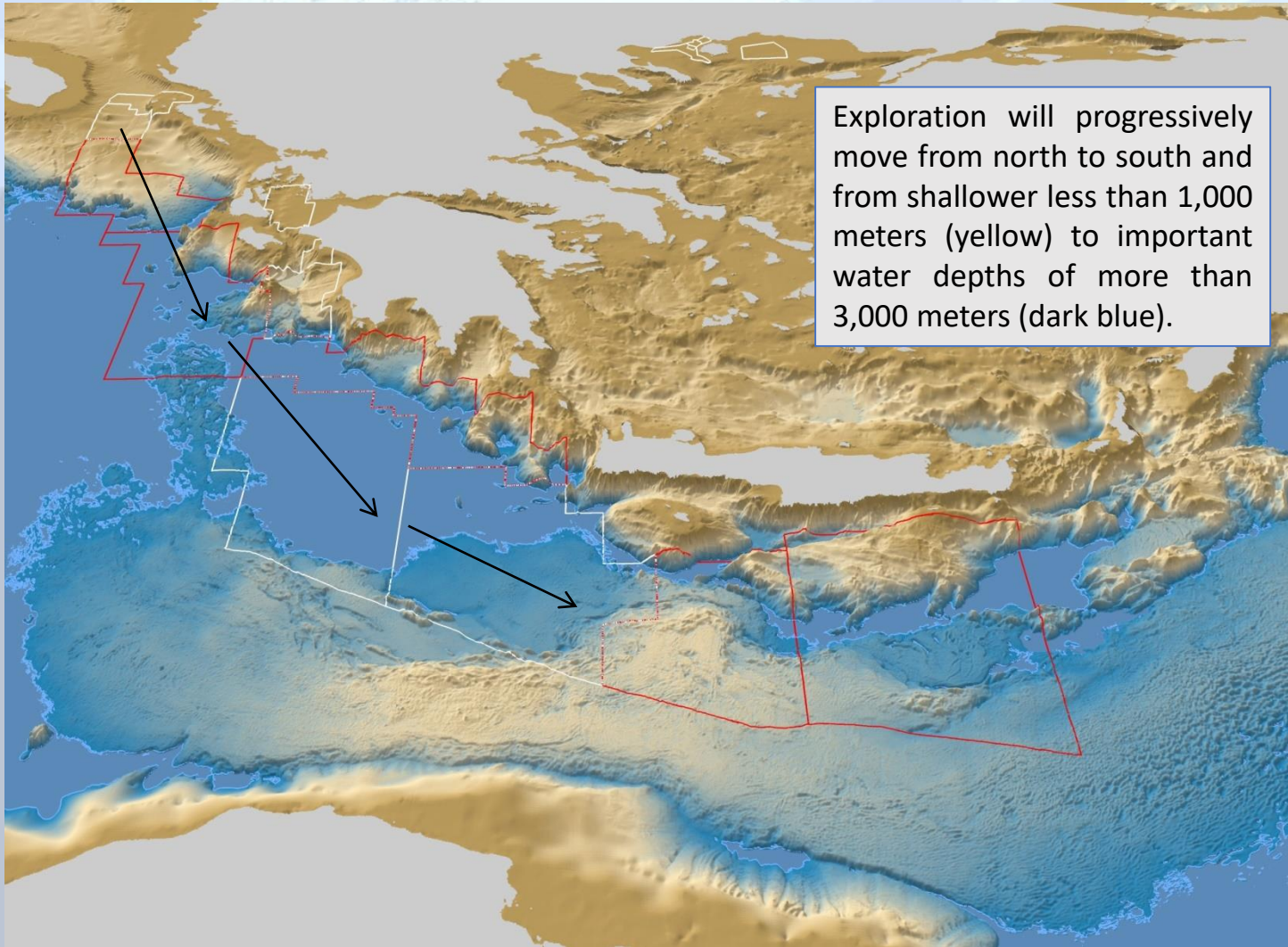


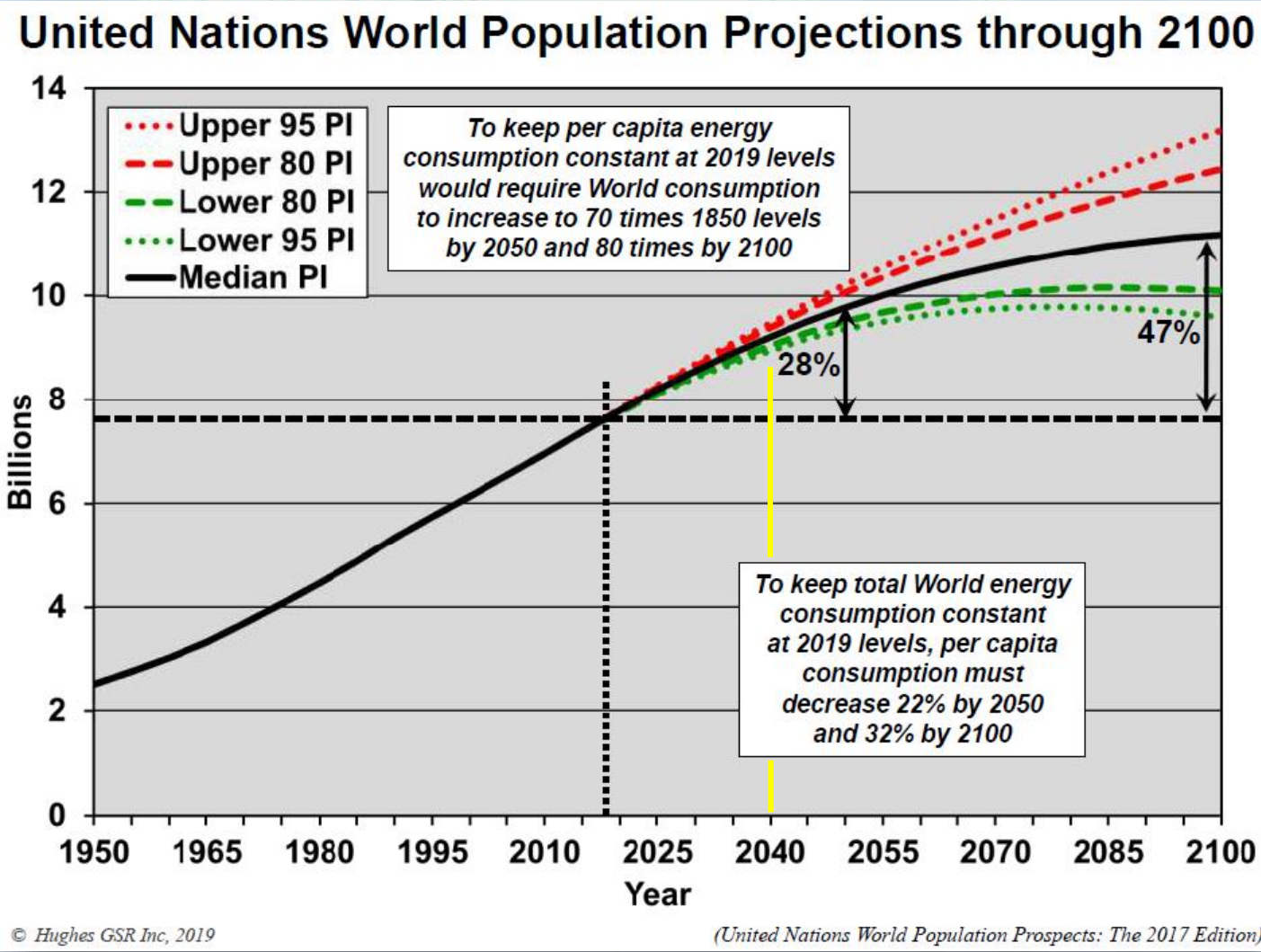
# New geological concept model added since 2015



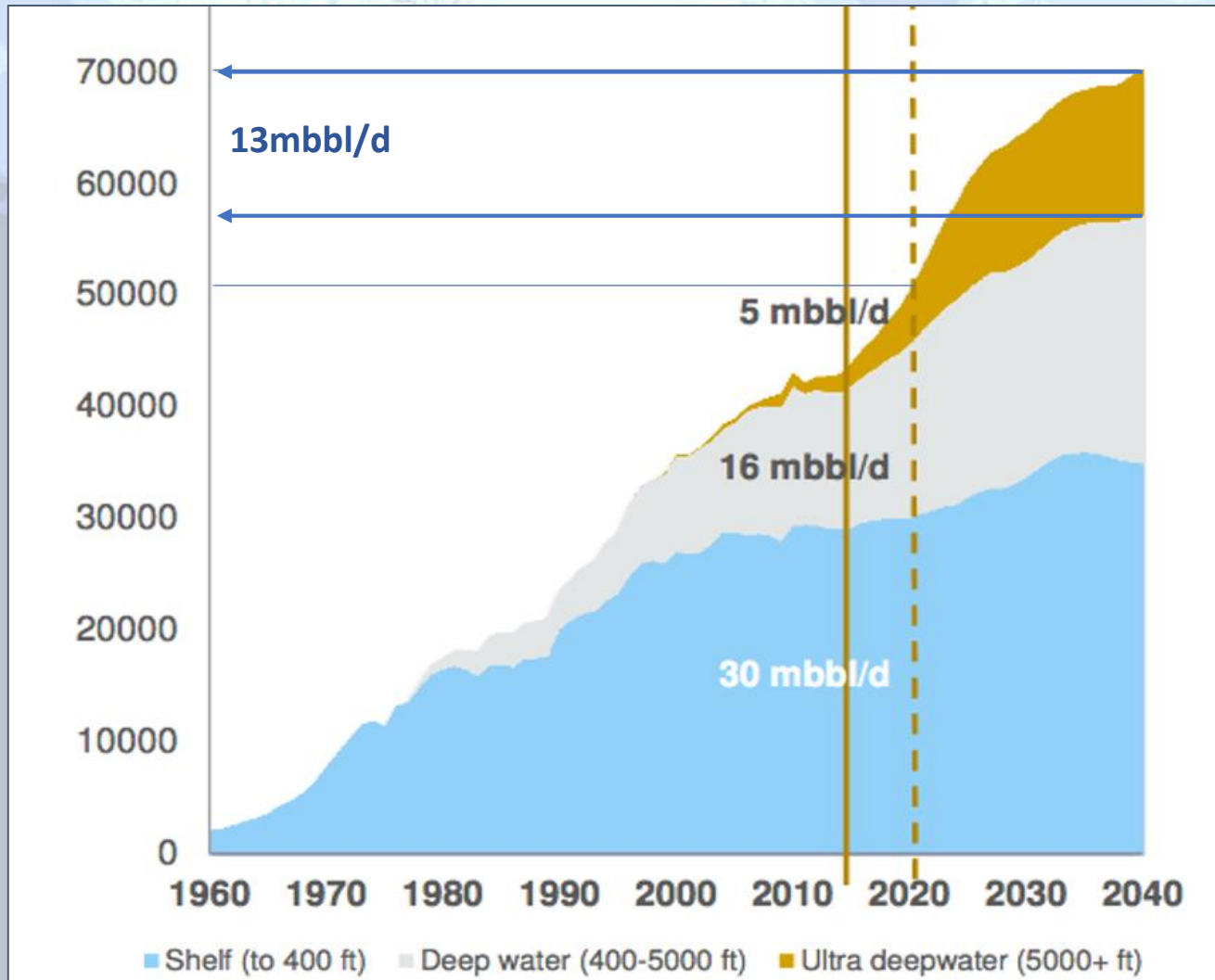


# If you take out 3000 meters of water

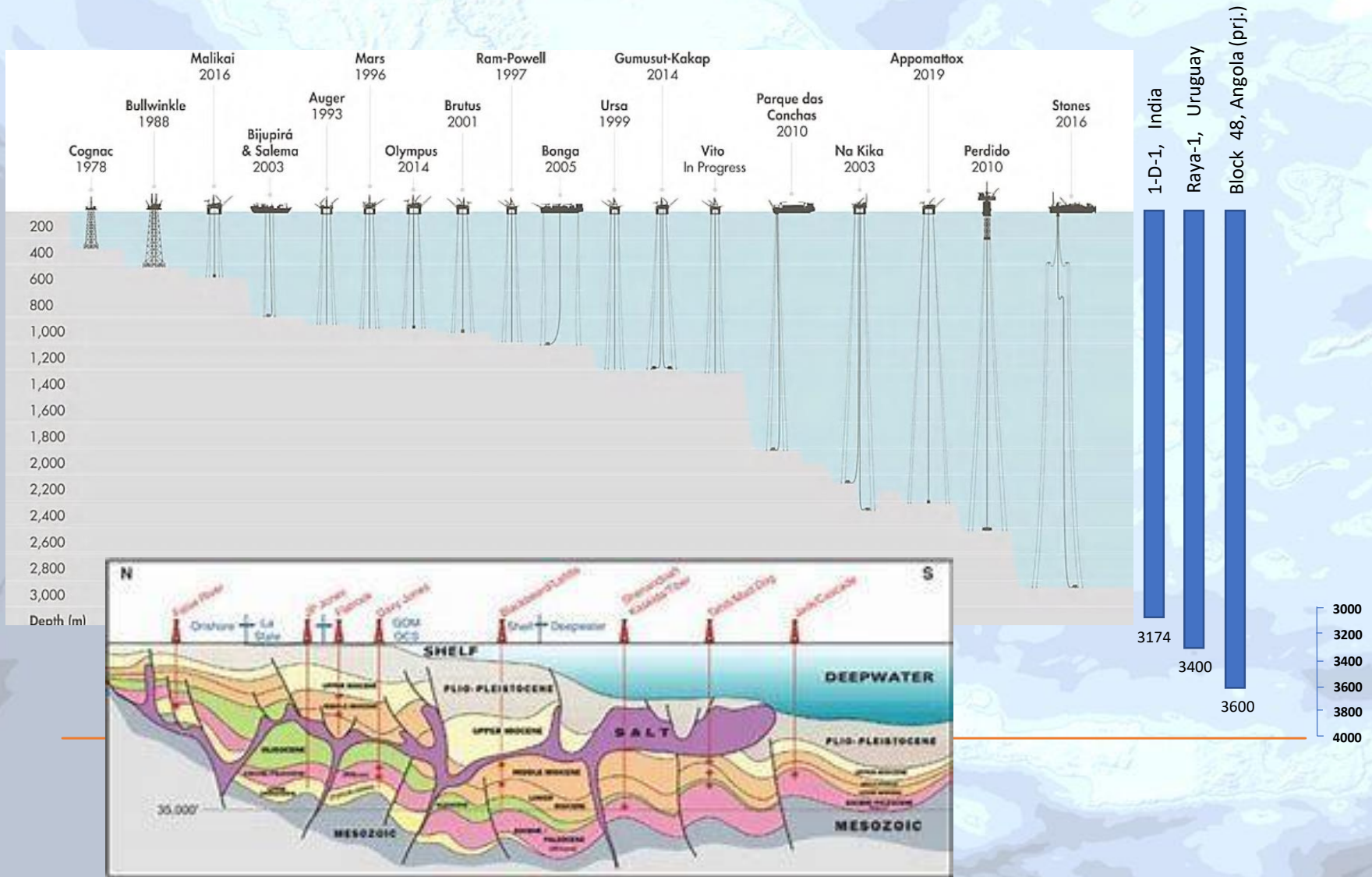




# Increasing production from ultra deepwater environments



# Improvement of drilling technology with increasing water depth



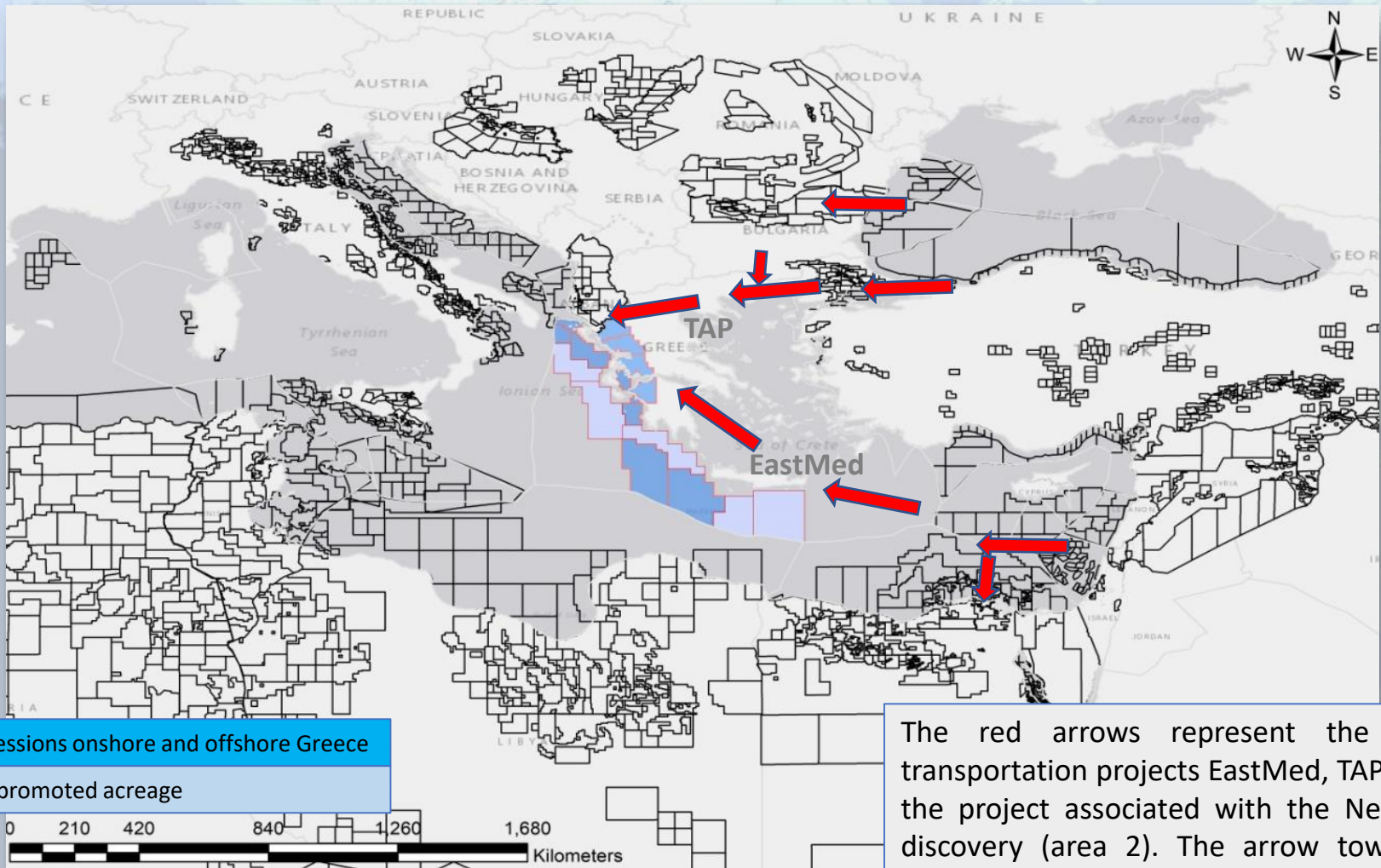
## Challenges

- Pore pressure, fracture gradient, pressure window
- Shallow well sections
- Deep well sections
- Salt Drilling
- Tar deposits
- HPHT
- Number of casings
- Well control issues
- Rig and equipment issues
- BOP issues and limitations

## Technologies

- Enhanced topsides facilities, improved hulls, stronger moorings and risers
- Advanced subsurface tools and monitoring equipment
- Improved modelling tools for safer vessel designs from explosion hazards and violent sea events
- Development of “next generation” metocean and meteorological predictive techniques

# When midstream and upstream meet



Concessions onshore and offshore Greece

New promoted acreage

The red arrows represent the gas transportation projects EastMed, TAP and the project associated with the Neptun discovery (area 2). The arrow towards Egypt to Damietta or Iddku LNG facilities.

