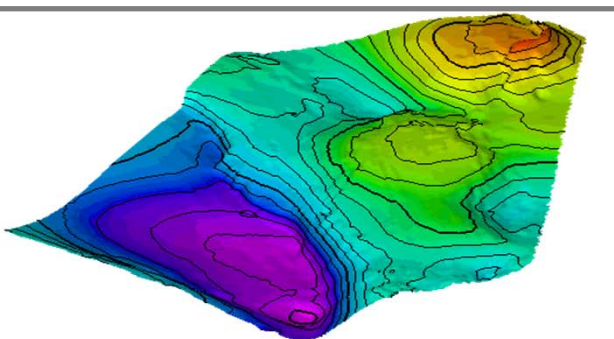


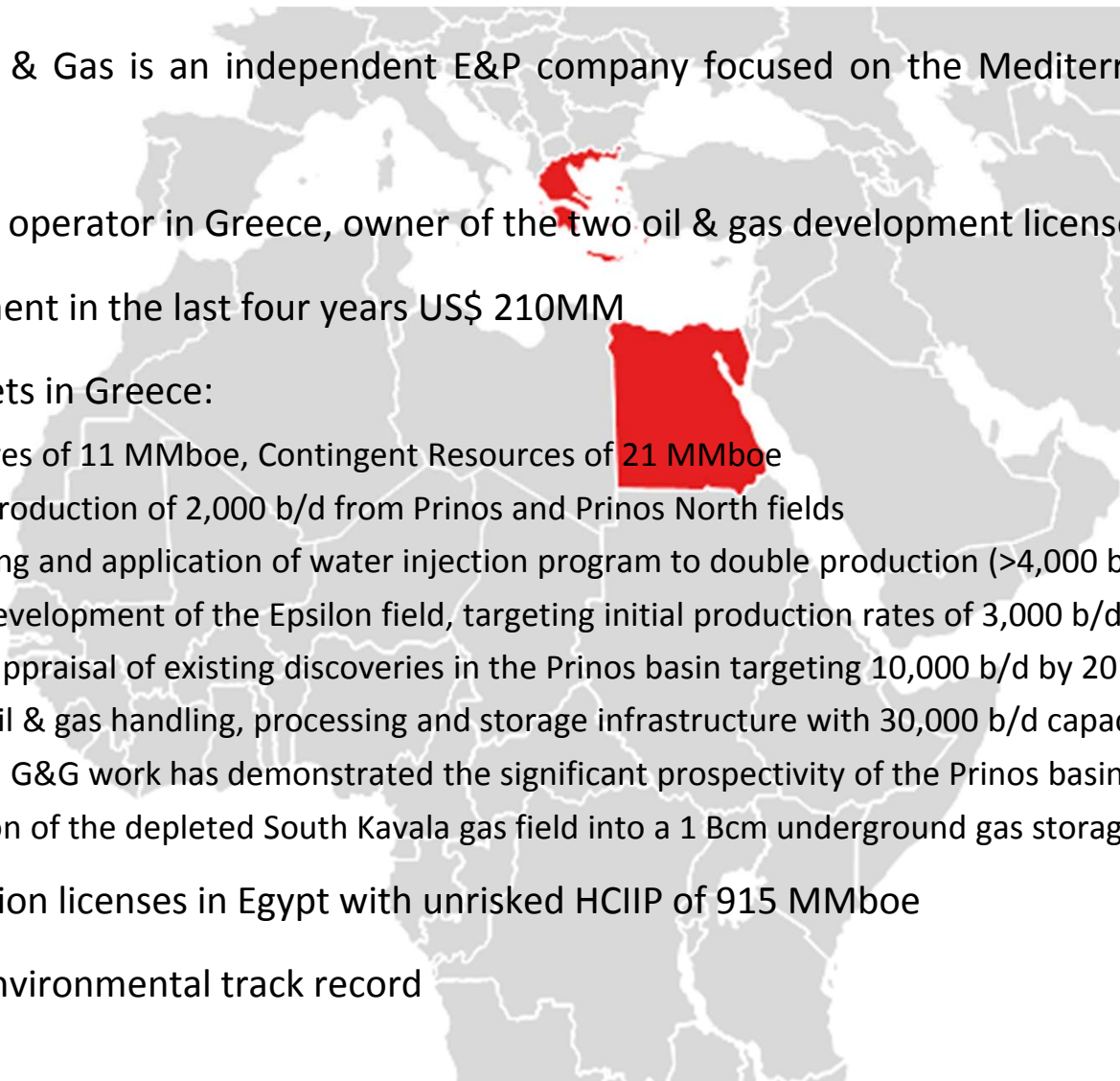
## The Revival of the Greek Oil & Gas Industry

*The success story of Prinos*



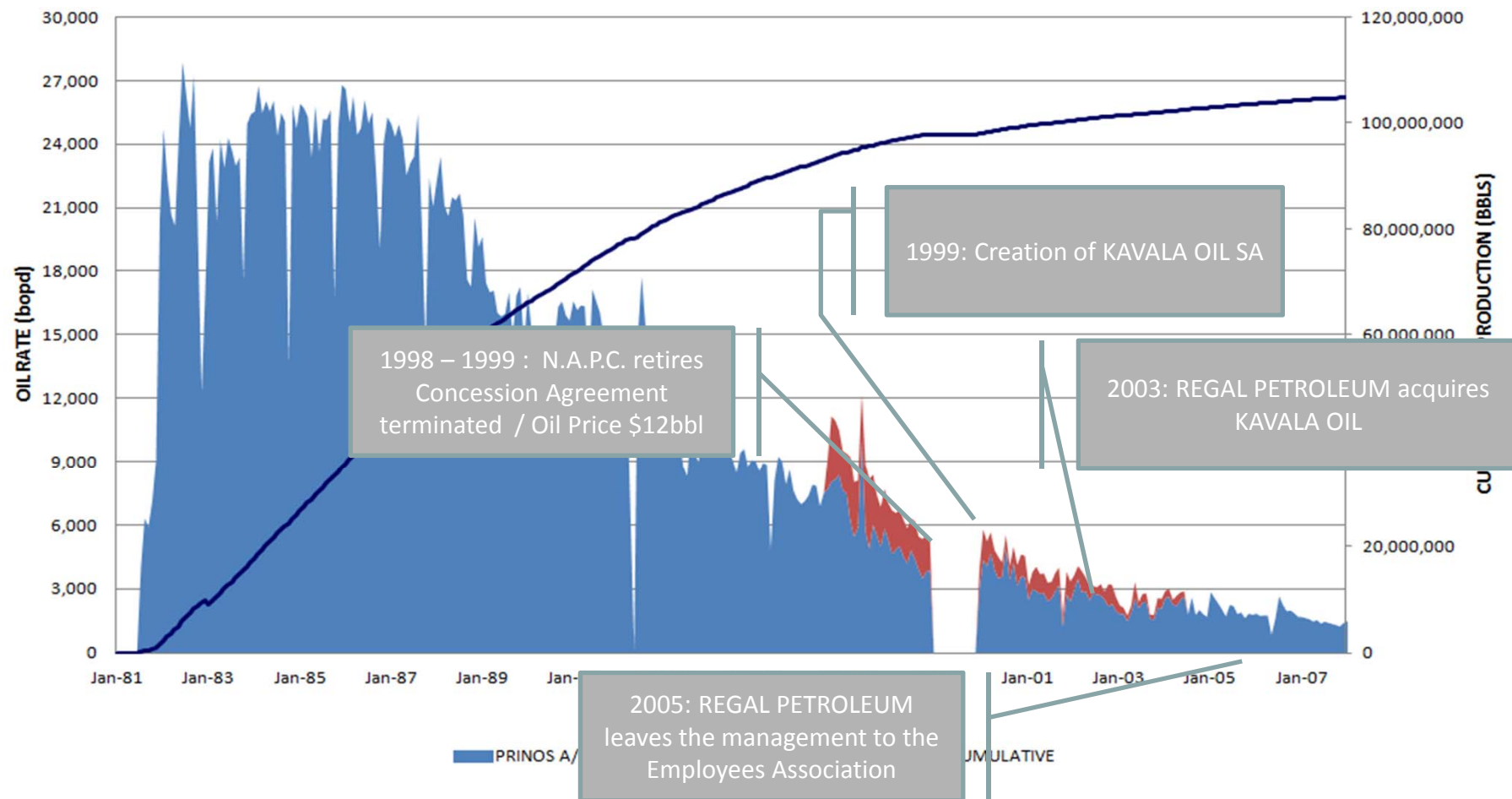
September 2011

- **Introduction**
- **Production History of Prinos Basin & Projections**
- **Reserves & Resources**
- **Epsilon Field**
- **Existing Discoveries in Prinos Basin**
- **New Projects**
  - **Underground Gas Storage**
  - **Enhanced Oil Recovery through CO<sub>2</sub> Capture & Injection**
- **Challenges of Investing in the Greek Oil & Gas Upstream Industry**
- **Taking the Greek E&P business beyond the Prinos success story**

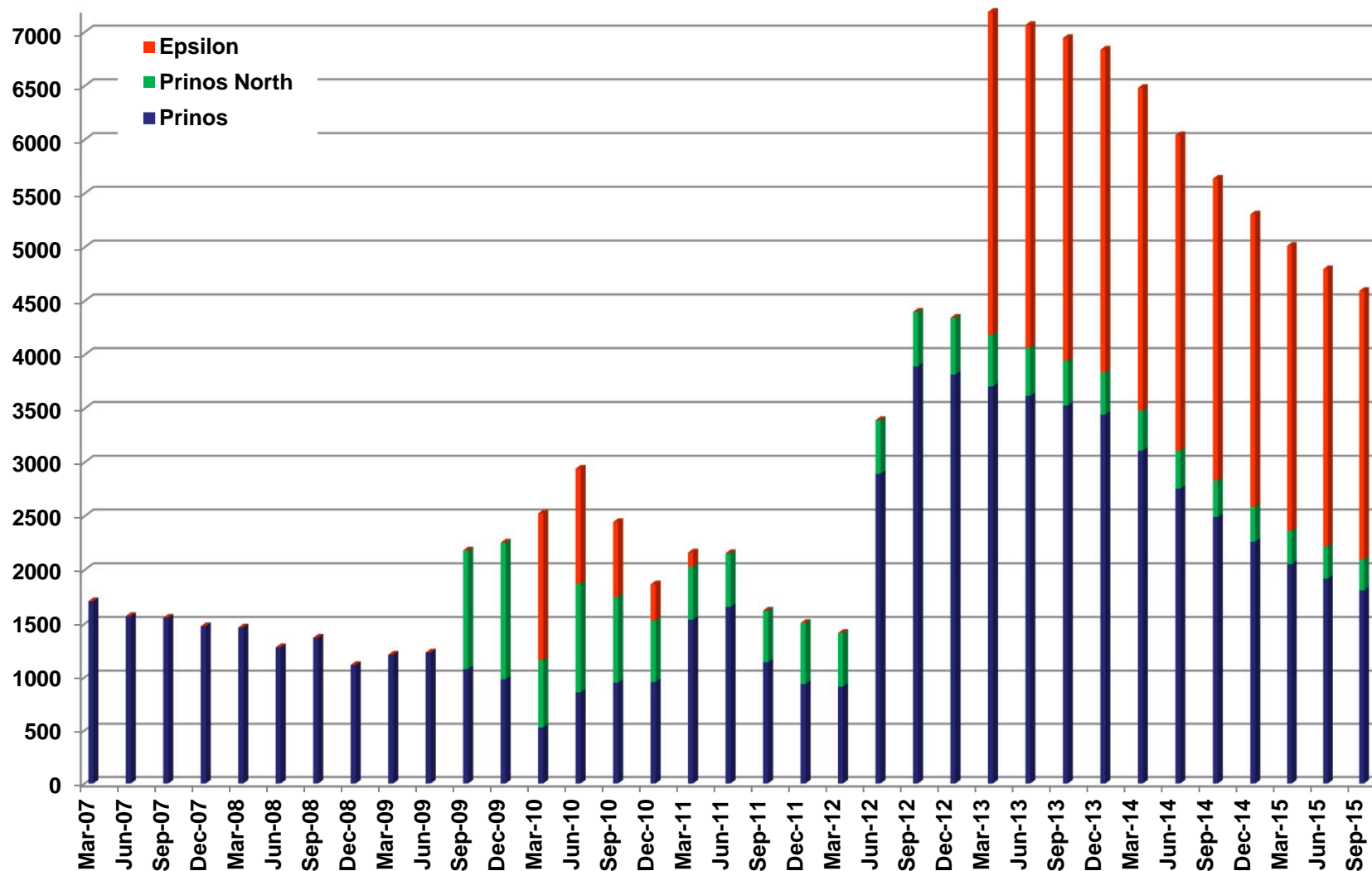
- 
- Energean Oil & Gas is an independent E&P company focused on the Mediterranean and MENA region
  - Sole oil & gas operator in Greece, owner of the two oil & gas development licenses in the country
  - Total investment in the last four years US\$ 210MM
  - Offshore assets in Greece:
    - 2P Reserves of 11 MMboe, Contingent Resources of 21 MMboe
    - Current production of 2,000 b/d from Prinos and Prinos North fields
    - Infill drilling and application of water injection program to double production (>4,000 b/d) in 2012
    - Phased development of the Epsilon field, targeting initial production rates of 3,000 b/d end of 2012
    - Low risk appraisal of existing discoveries in the Prinos basin targeting 10,000 b/d by 2014
    - Existing oil & gas handling, processing and storage infrastructure with 30,000 b/d capacity
    - Advanced G&G work has demonstrated the significant prospectivity of the Prinos basin
    - Conversion of the depleted South Kavala gas field into a 1 Bcm underground gas storage with Edison
  - Two exploration licenses in Egypt with unrisksd HCIIP of 915 MMboe
  - Un parallel environmental track record

# Production History of Prinos Basin

## HISTORICAL PRODUCTION (JAN 81 - DEC 07)



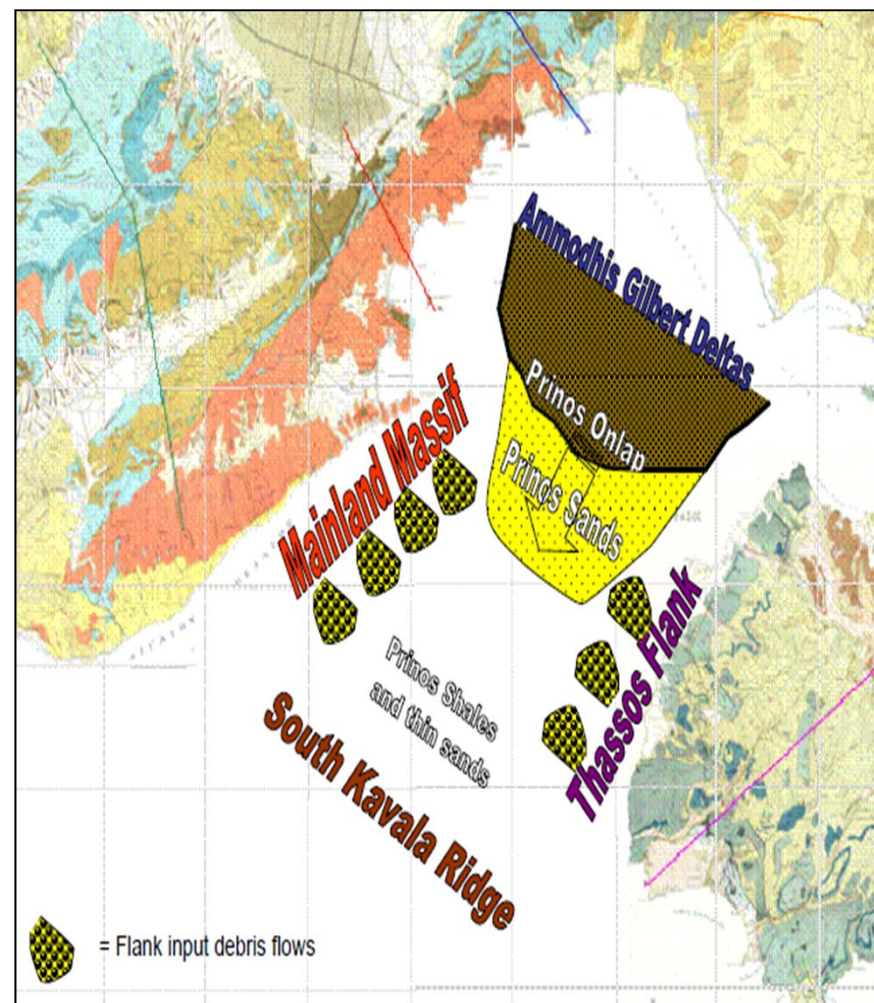
## Production History & Projections ( bbls/day)



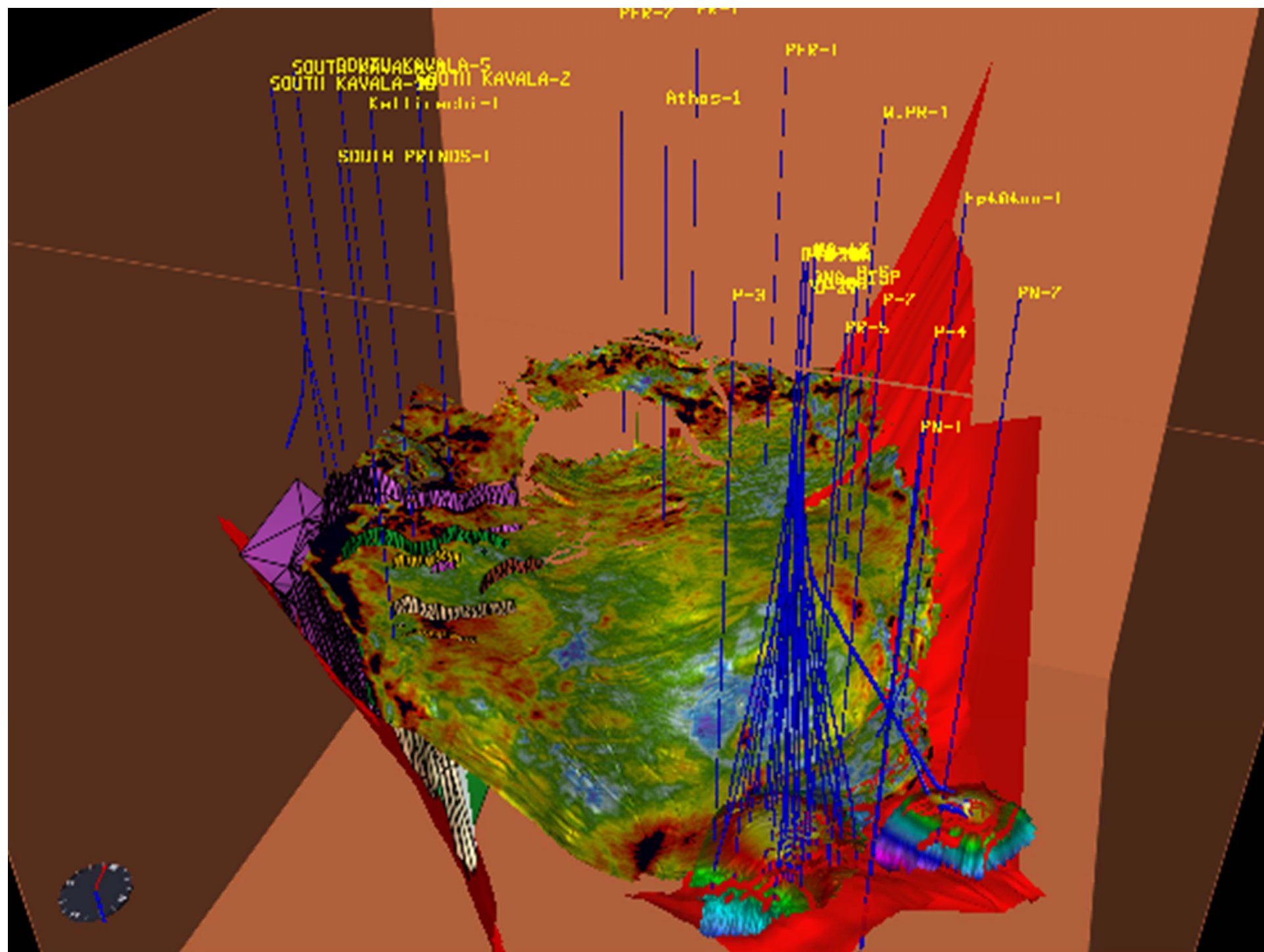
## Current Reserves & Resources

Resource Category	Unrisked Net HCIP (MMboe)	Estimated Net Reserves & unrisked Resources (MMboe)
Reserves (2P)	321.6	11.3
Unrisked Contingent (2C)	48.2	21.1
Unrisked Prospective (Best Estimate)	233.3	62.6
Unrisked Resources	281.5	83.7
<b>Total</b>	<b>603.1</b>	<b>95.0</b>

Source: Petrenel CPR as of February 2011



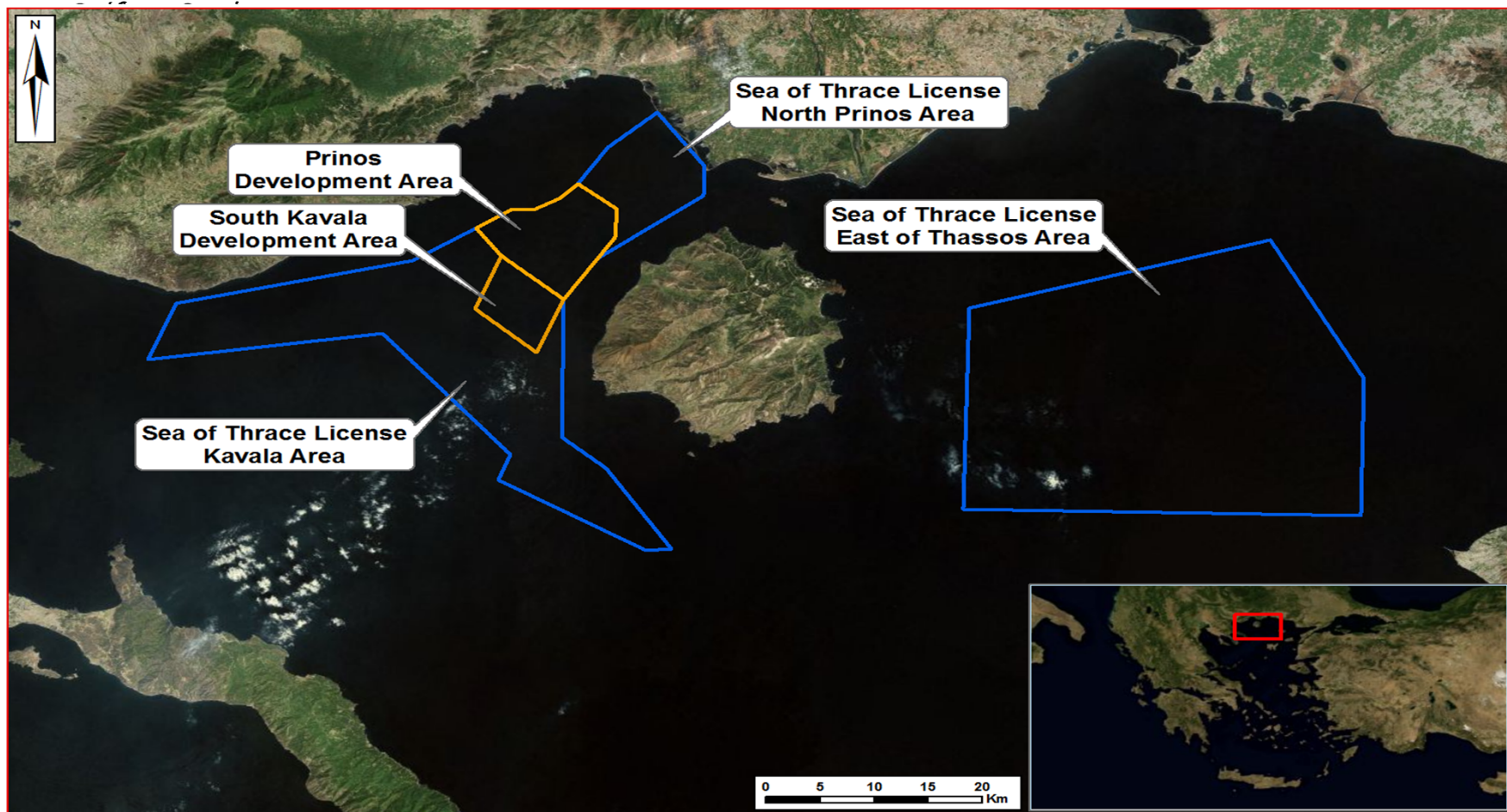




## Exploration and Development Licenses in Greece

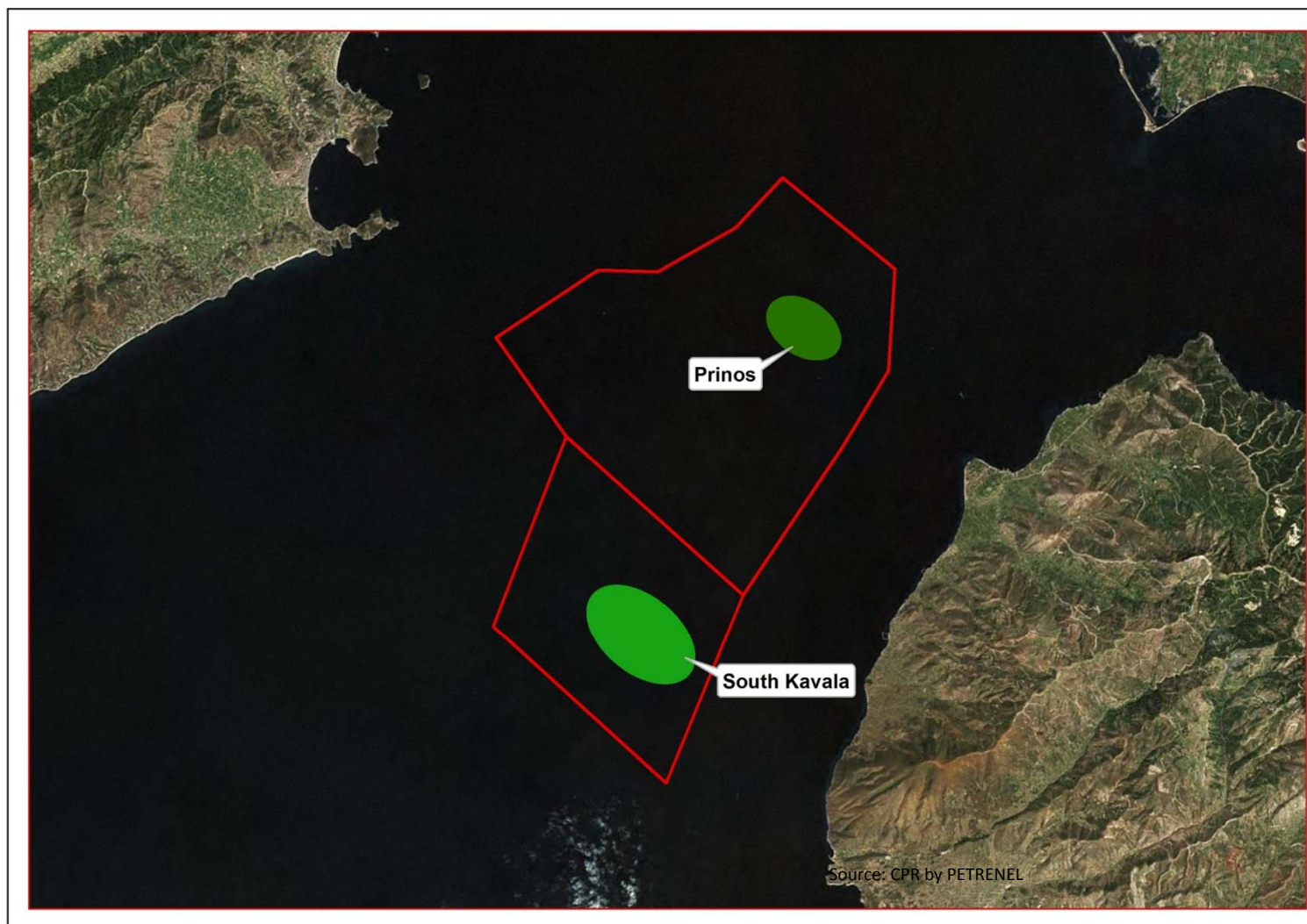
### Three Concession Areas

- 100% of the Prinos Development Area
- 100% of the South Kavala Development Area
- 70% of the Sea of Thrace Exploration License (subject to certain conditions precedent to the

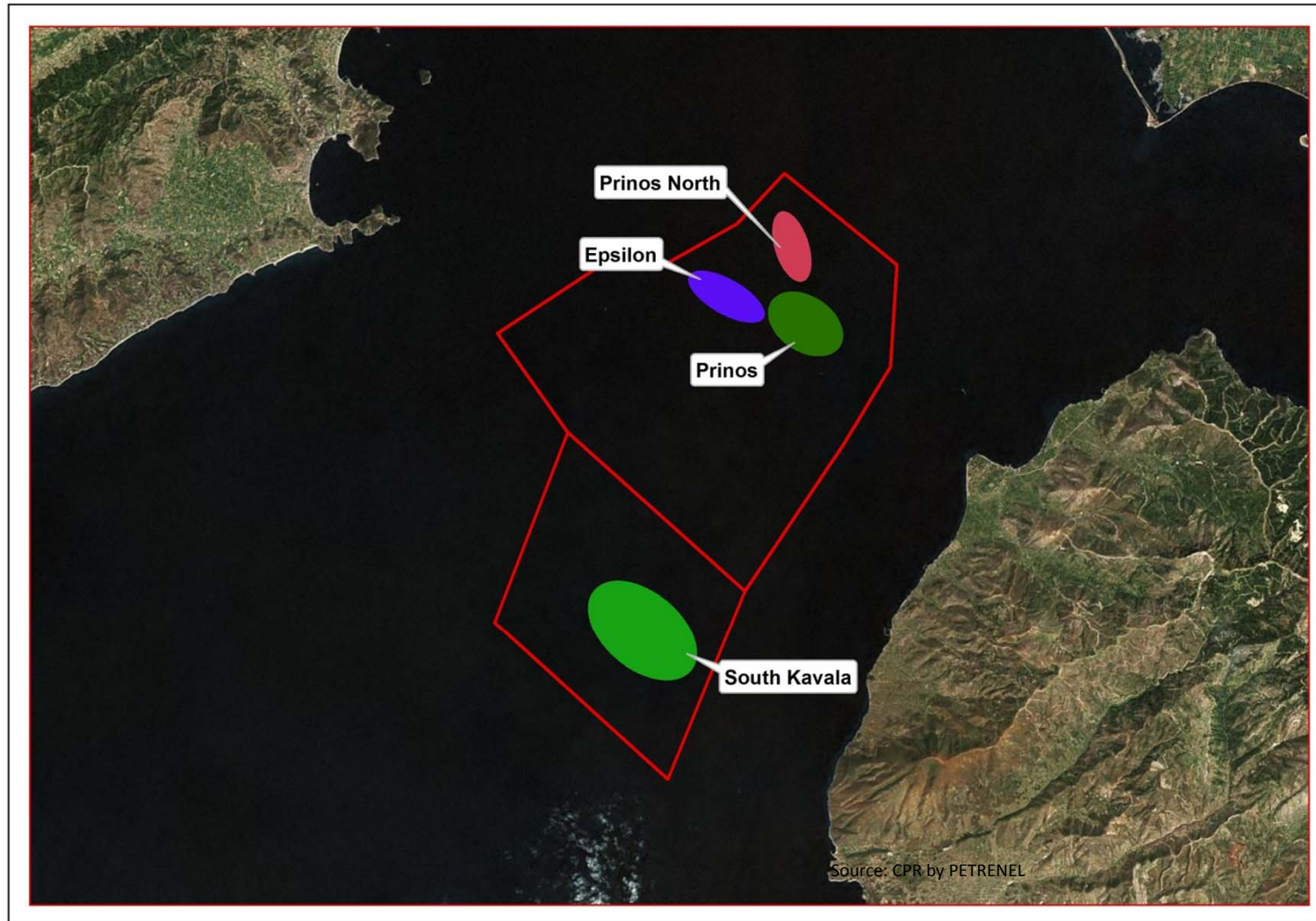




## 2007 – What we acquired

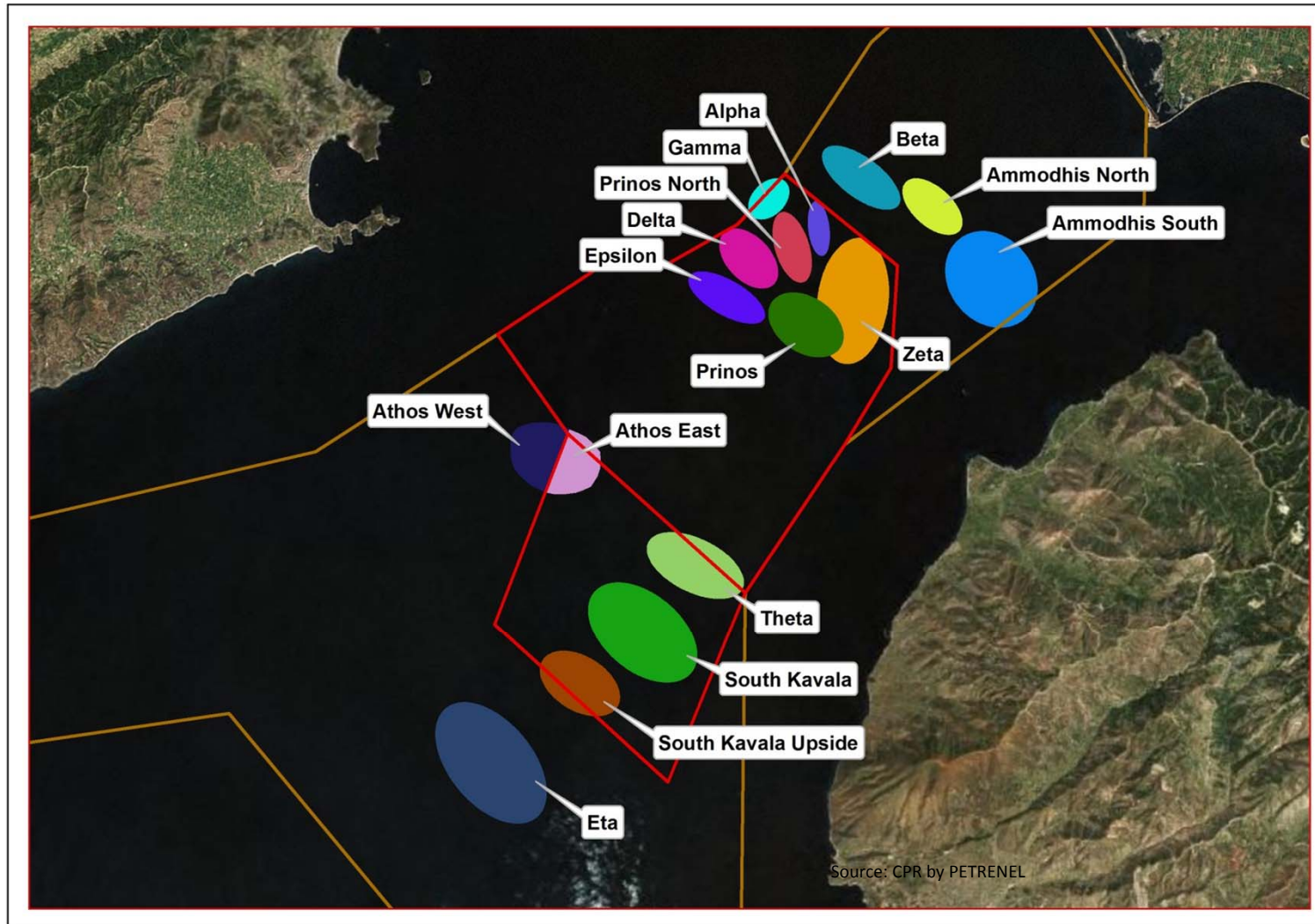


## 2010 – The results of Energean's investments





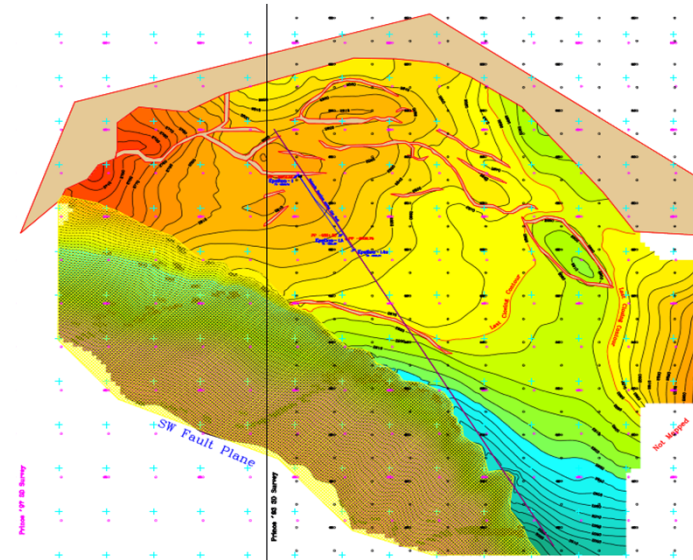
## 2011 – The results of Energean's G&G work



**Note:** Sea of Thrace license is subject to certain conditions precedent to the Calfrac SPA

## Epsilon Field

- Discovered 2001 appraised with a sidetrack in 2002
- 2010 ERD well (5.3km) drilled from Prinos platform
- Produced 320,000 barrels -suspended in 2011 due to technical challenges
- STOIIP of at least 32MMboe, no OWC found
- Schlumberger independent study STOIIP 50 Mmboe



### Phase 1 Development

- 4 wells: 2 producers and 2 water injectors
- Minimum facilities platform, tied back to the main Prinos processing platform
- Budget of EUR 60MM - 12 months to first oil
- Initial production rates & plateau 3,000 b/d
- Recoverable reserves 6.3 million barrels





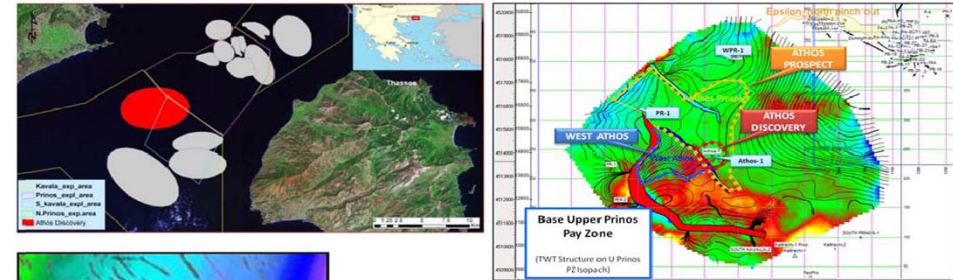
## Existing Discoveries in Prinos Basin

Great evidence of the basin's prospectivity

### Athos

- Discovered by NAPC in 1982 by Athos-1
- Net reservoir Interval 2574-2630m
- Final flow rate 250 b/d (45<sup>0</sup> API)
- Proves the existence of stratigraphic plays in the basin

### Athos Field

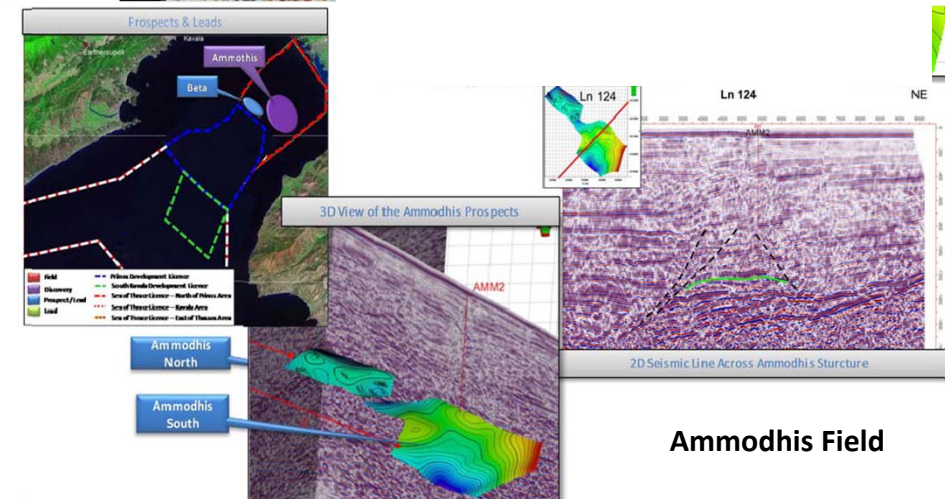


### Ammodhis

- Discovered by Ammodhis-1 & 2 wells in 1976
- Two reservoirs: lower 38<sup>0</sup>API, upper 17<sup>0</sup>API
- Porosities 14 to 23%
- Poor testing practices applied provided little information

### Zeta

- Discovered by P4 well in 1976
- Flow rate of 1,187 b/d (37<sup>0</sup>API)
- Porosities 10 to 14%
- Evidence of a pre-Prinos equivalent reservoir
- The interpretation to determine the extent of this prospect is high priority



### Ammodhis Field



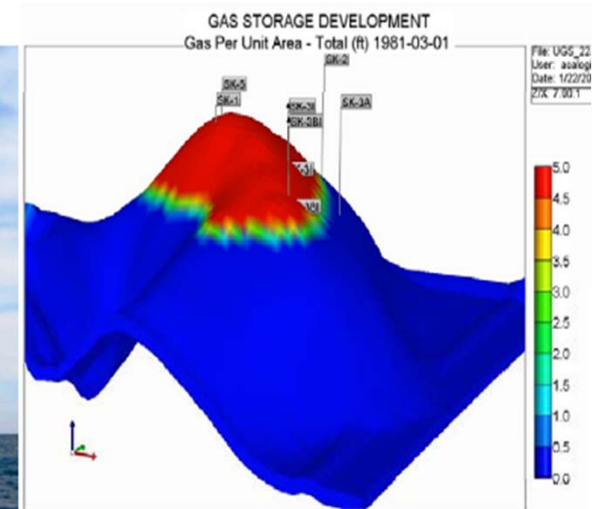
## **New projects:**

Underground Gas Storage

Enhanced Oil Recovery through  
CO<sub>2</sub> Capture & Injection

# Conversion of South Kavala to Underground Gas Storage

- Initial GIP 958 MM m<sup>3</sup>
- Working gas 525 MM m<sup>3</sup>
- Deliverability 7 MM m<sup>3</sup>/day
- Benefits from the project
  - Strategic reserves for the country
  - Security of supply
  - Will introduce competition to the gas market
  - The only planned UGS project in Greece
  - Ideally positioned to provide gas to the TGI, TAP and Nabucco pipelines



- **Utilizing existing infrastructure**
  - A large part of necessary facilities already in place
  - Extends the life of the facilities
  - No Environmental Impact
  - Ensures long term employment in Kavala

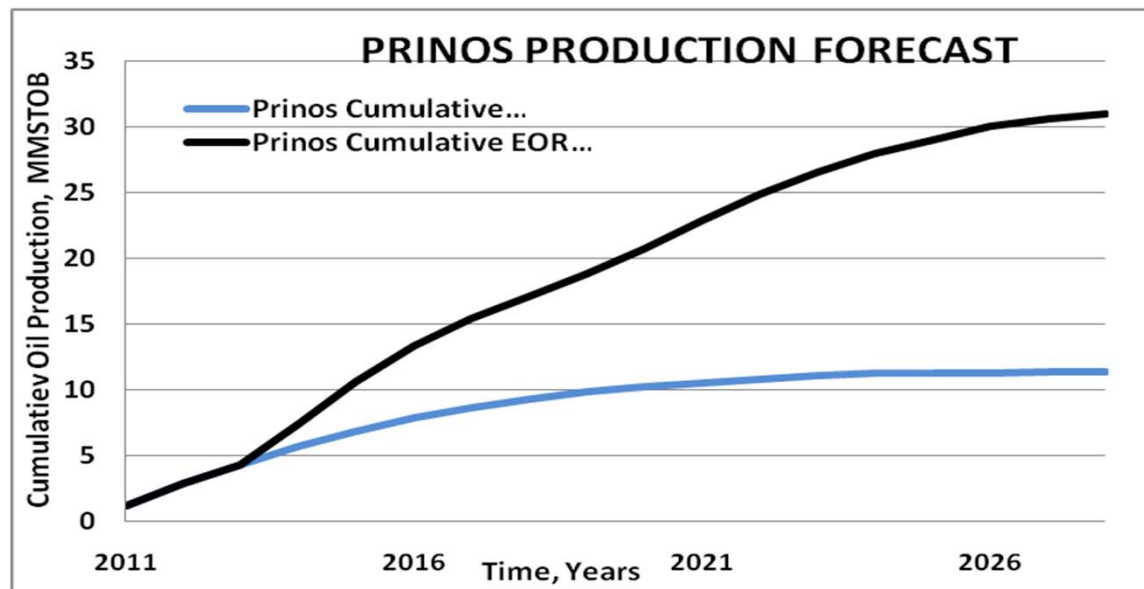
- **Strategic Partnership with Edison Spa**

- **Investment estimate of €400M by Technip**



## EOR through CO<sub>2</sub> Capture and Injection in Prinos Field

- Proven and mature technology with 35 years of CO<sub>2</sub> capture, transport & injection
- Prinos reservoirs meet all the technical screening guidelines for CO<sub>2</sub> flooding
- Potential increase of recovery by 10-15%, circa 30 MM bbls and increased CO<sub>2</sub> emission credits
- A pilot plan is under study to implement CO<sub>2</sub> injection in Prinos B/C Reservoirs
- Possible additional CO<sub>2</sub> supply from adjacent fertilizer plant
- Environmental benefits through reduction of CO<sub>2</sub> emissions





## Challenges of Investing in the Greek Oil & Gas Upstream industry

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- Bureaucracy and lack of flexibility in the public sector
- Lack of continuity in Ministry Administration
- Lack of technical knowledge and expertise in oil policy
- Delay of VAT reimbursement creates liquidity problems - €15MM receivables
- State's credibility issue affects opportunities to raise capital and attract investments
- Validity and clarity of Laws - Need for "interpretations"
- Environmental laws and conditions – Delays in approvals of relevant applications
- Inflexible Employment laws
- No local market support from service companies and oil industry equipment
- High operating costs
  - 2009 OPEX/Barrel = \$ 95,25
  - 2010 OPEX/Barrel = \$ 81,09
  - 1<sup>st</sup> Half 2011 OPEX/Barrel = \$ 92

## Taking the Greek E&P business beyond the Prinos success story



- Invested more than 200 million U.S. dollars in 4 years
- Drilled the most challenging wells ever drilled in Greece – 3 rigs in 4 years
- Put Greece back on the map of oil producing countries
- Expanded in Egypt as an operator
- Built relationships with international service companies
- Invested in Human Capital - created a new generation of Geoscientists
- 260 skilled workers in Kavala , 20 industry professionals in Athens and 5 in Cairo
- Design and plan for innovative projects (underground gas storage, CO2) exploiting our national wealth; resources and human capital
- Support the academic community and promote links with the market
- Support the local community in Kavala
- Committed to maintain our high environmental and safety track record
- Prepared to further invest despite the negative climate in the country

A photograph of several offshore oil and gas rigs silhouetted against a dramatic sunset sky with scattered clouds. The rigs are complex structures with tall derrick-like towers and various platforms. The sun is low on the horizon, creating a warm glow and reflecting on the water's surface. The overall scene is industrial and atmospheric.

[www.energean.com](http://www.energean.com)

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