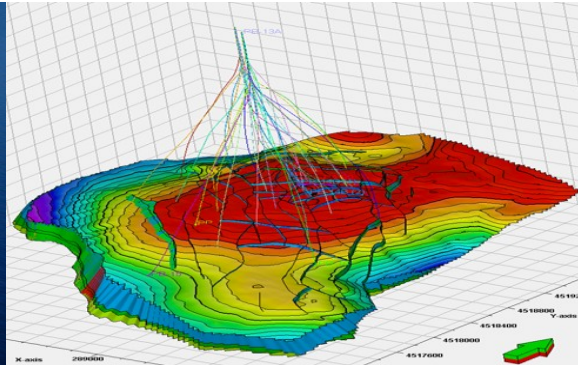




Opportunities and Challenges of Investing in the Greek E&P sector

Mathios Rigas, Chairman & CEO



IENTE 18th Conference “Energy & Sustainability”
Athens, December 3rd & 4th, 2013

1. **Perception** of the public about Oil & Gas in Greece & **Reality check**
2. What **HAS been** achieved in the E&P Sector in Greece
3. **Prinos – The success story & the Investment plan**
4. **Investors' challenges** in the E&P Sector in Greece
5. **Actions** to take the E&P Sector into a new Era

Τεράστια κοιτάσματα πετρελαίου στον Κυπαρισσιακό κόλπο

"50 φορές μεγαλύτερο το κοιτάσμα της Κύπρου Λεβιάθαν!"

WikiLeaks: Τεράστια αποθέματα πετρελαίου στην Ελλάδα
« on: May 16, 2012, 02:53:21 PM »

WikiLeaks: Τεράστια αποθέματα πετρελαίου στην Ελλάδα γιατί έκανε το παγώνι ο Παπανδρέου ::

ΕΘΝΙΚΑ ΘΕΜΑΤΑ-ΕΛΛΑΔΑ

ΕΠΙΚΑΙΡΟΤΗΤΑ ΕΘΝΙΚΩΝ ΘΕΜΑΤΩΝ, ΠΑΡΟΥΣΙΑΣΗ ΚΑΙ ΠΕΡΙΓΡΑΦΗ ΕΘΝΙΚΩΝ ΑΠΕΙΛΩΝ ΣΕ ΓΕΩΠΟΛΙΤΙΚΟ, ΟΡΘΟΚΕΝΤΡΙΚΟ ΚΑΙ ΠΟΛΙΤΙΣΜΙΚΟ ΕΠΙΠΕΔΟ, ΑΝΑΦΟΡΑ ΣΤΟΥΣ ΦΑΝΕΡΟΥΣ ΚΑΙ ΚΡΥΦΟΥΣ ΕΧΘΡΟΥΣ ΤΟΥ ΕΛΛΗΝΙΣΜΟΥ, ΣΥΣΤΗΜΑ ΑΠΡΕΣΩΝ ΚΑΙ ΔΙΕΘΝΩΝ ΟΡΓΑΝΩΣΕΩΝ ΠΟΥ ΕΧΟΥΝ ΣΑΝ ΣΚΟΠΟ ΤΗΝ ΦΙΜΩΣΗ ΤΟΥ ΕΛΛΗΝΙΣΜΟΥ ΚΑΙ ΤΗΝ ΕΓΚΑΘΙΡΥΣΗ ΜΙΑΣ ΠΑΓΚΟΣΜΙΑΣ ΚΥΒΕΡΝΗΣΗΣ, ΓΕΤΟΝΙΚΕΣ ΑΠΕΙΛΕΣ ΚΑΙ ΕΛΛΗΝΙΚΗ ΑΚΕΡΑΙΟΤΗΤΑ.

15/05/2012

Η χώρα μας είναι πλούσια. Όλοι βέβαια, αυτοί που μνημόνιο. Σύμφωνα με Κρήτης είχαν ήδη εντοπιστεί κοιτάσματα πετρελαίου στην Κρήτη.

Τετάρτη, 5 Ιανουαρίου 2011
Καθηγητής Πανεπιστημίου Κρήτης κ. Αντώνης Φώσκολος: «Δύο τρις, \$ ο ορυκτός πλούτος της Ελλάδας»

Ξεκινήστε από εδώ! | iNews Infinity: Όλες οι Ειδήσεις σε 1 Σ

Παπακωνσταντίνου: Μέχρι τον Δεκέμβριο θα αρχίσουμε να βγάζουμε πετρέλαιο

15:49 23/3/2012 - Πηγή: Σοφοκλέους in

Σε μ... αναλ

ΕΘΝΟΣ.gr Δευτέρα, 2/12/2013

NEA ΣΕ 10" ΠΟΛΙΤΙΚΗ ΚΟΙΝΩΝΙΑ ΟΙΚΟΝΟΜΙΑ ΔΙΕΘΝΗ ΠΕΡΙΒΑΛΛΟΝ ΑΡΘΡΟΓΡΑΦΙΑ ΕΘΝ

ΚΟΙΝΩΝΙΑ

ΒΡΙΣΚΕΤΕ ΕΔΩ: ΚΟΙΝΩΝΙΑ

ΕΘΝΟΣ «Ε» 16/5/2008

Σε ποιες περιοχές της Ελλάδας «μυρίζει» πετρέλαιο

A+ Δ. Μέντρος γραμμάτων

- **Colossal** investors express interest and impress international Financial analysts
- **Immediate** exploration to commence
- **Lobbies** and corrupt employees of the public sector have stopped the growth
- **No political will** is the reason for the delays
- **Wikileaks – Intentional cover** of Greek wealth to bankrupt Greece
- Professors and experts talk about **22 billion barrels** South of Crete representing €1 trillion value
- **Conspiracy** of silence by 5 Greek families
- Ex-Prime Minister G. Papandreou declares **Greece has no oil**

Does Greece Have Oil & Gas resources?

Reality Check 1 - Prinos is the only hydrocarbons production in Greece



Reality Check 2 - Prinos is the only hydrocarbons production in Greece



Inauguration of new drilling campaign in July 2013 in Prinos and Prinos North, aiming to double production from the current level of 1,800 bbls/d

■ 2013 Drilling Programme

- ✓ 1 injection well (PB-23) to increase the pressure in Prinos field – **Completed in Sept.2013**
- ✓ 1 infill production well (PB-34) in the Prinos oil field **Completed in Nov.2013 – production increase 850 bbls/d**

■ 2014 Drilling Programme

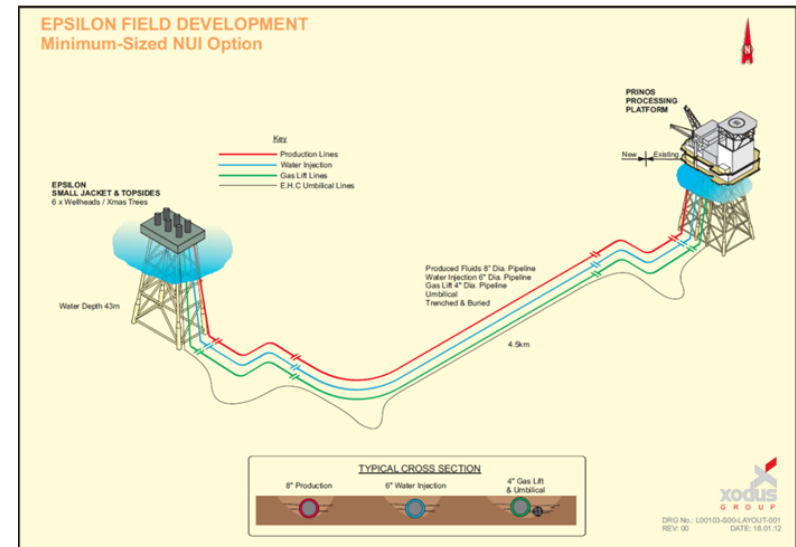
- 2 infill production wells (PA/35PB-37) in the Prinos oil field expected to add 1,000 bbls/day
- ERD well, PNB-H4 at Prinos North,
 - Expected production rates of 1,500 bbls/d
 - Budget US\$ 25m
 - 3 months to first oil
 - Remaining recoverable reserves 4.3 mmbob

■ Total Investment \$60 million

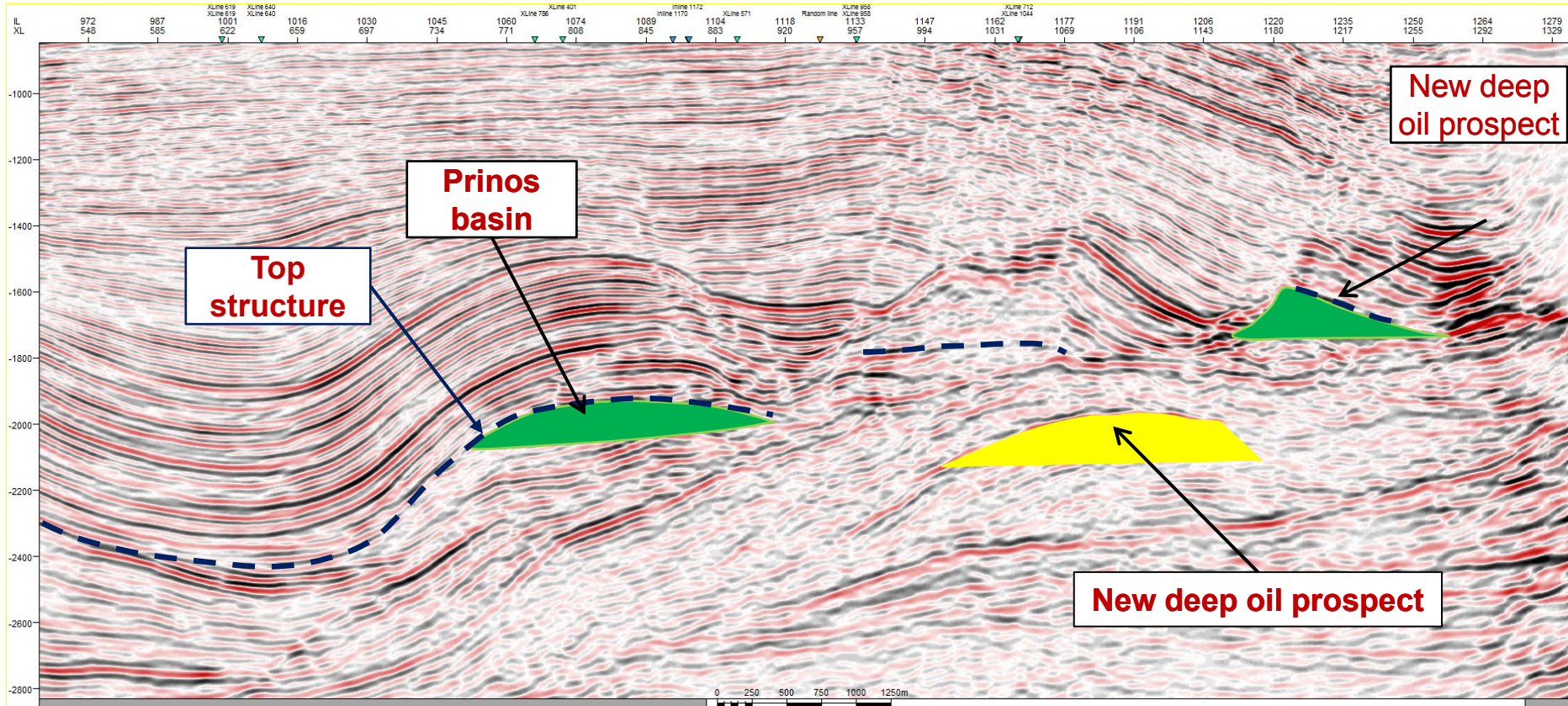


2014/15 Development of Epsilon Field

- Discovered in 2002
- Energean drilled ERD (5.5 Km) in 2010 produced 300,000 bbls through extended well test
- STOIP of at least 32mmboe supported by production history match
- Full field development plan - 4 wells: 2 producers and 2 water injectors
- Minimum facilities platform, tied back to the main Prinos processing platform
- Initial production rates & plateau 3,000 bbls/d
- Recoverable reserves of 10.0 mmboe
- US\$ 100m investment -12 months to first oil

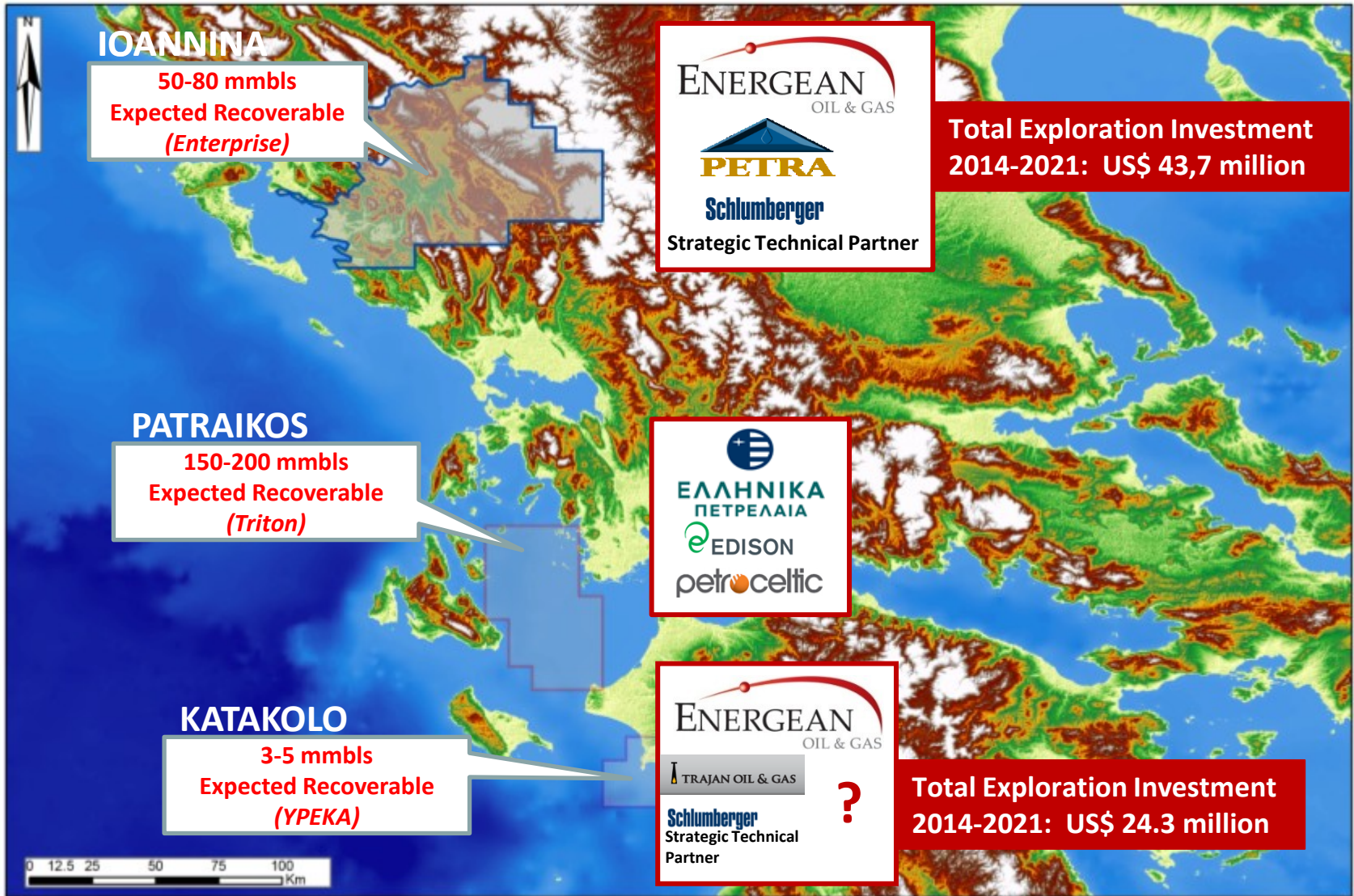


Exploration Upside from Prinos Basin



- Deep stratigraphic mapping
- Major folds mapping
- Detailed mapping of existing fields
- Identification of new drilling targets

Open Door Invitation in Western Greece- Bidders



Ioannina

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Existing Petroleum System

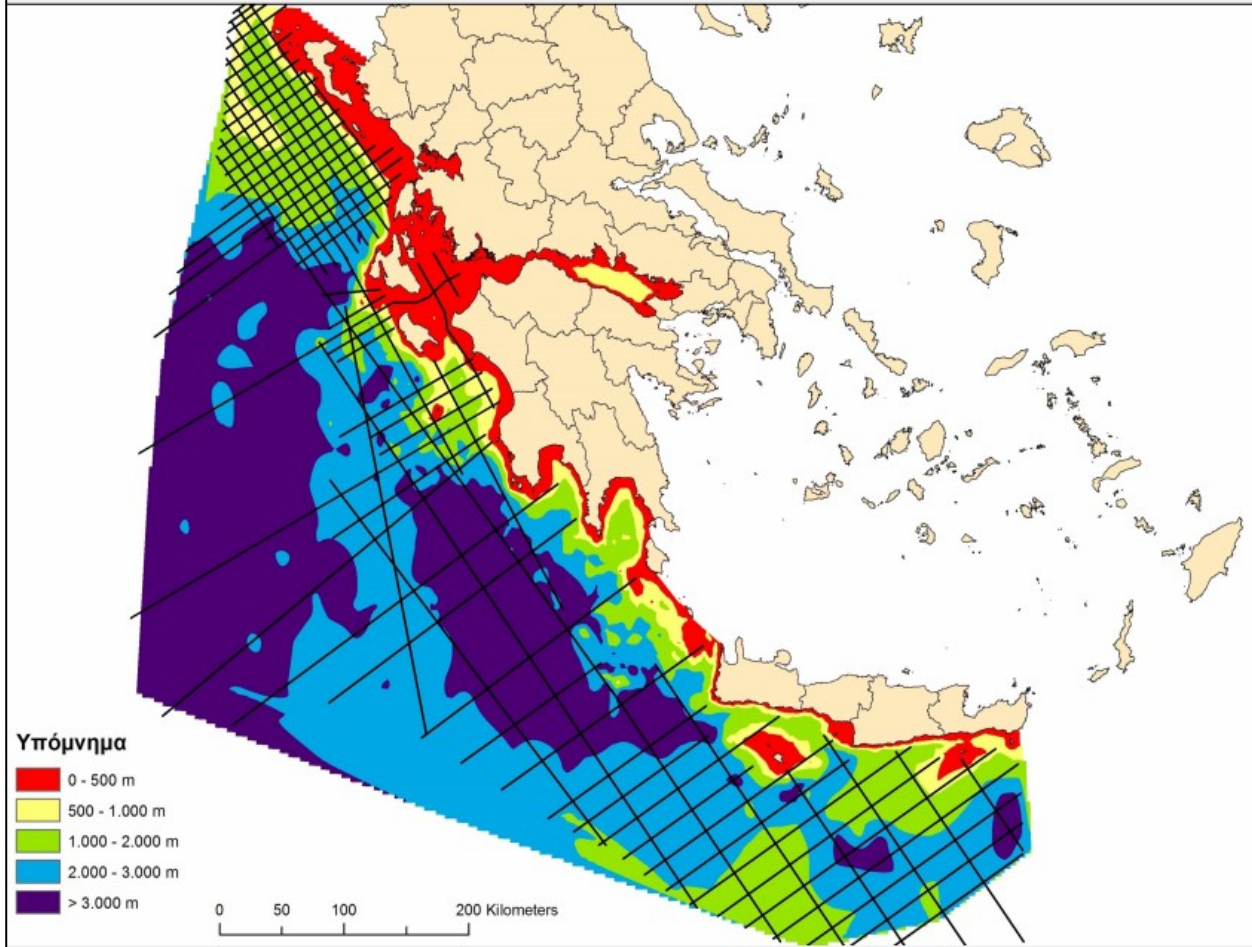




Thasos Island



Bathymetric map and Seismic Survey



Tentative timetable for W. Greece & S. Crete

PGS interpretation of 2D surveys	2014 -Q1
Data Evaluation & tender procedure	2015
Contracts	2016
Exploration phase (up to 7 yrs.)	2023
Development phase	?
Production phase	?

Deep-water Opportunities

- New JV subsidiary **OceanEnergiean** with **Ocean Rig**, combines exploration, development and production of hydrocarbons with track-record in deepwater drilling
- Ocean Rig is the Owner and operator of 11 offshore ultra-deep water drilling units, comprising of **2 ultra-deep water semi-submersible drilling rigs** and **9 ultra-deep water drill ships**
- More than **160 deep and ultra-deep-water wells** ranging from **300m to 2650 m**, for 31 clients, in 10 years
- Drilled in harsh environments and in nearly every deepwater area of the world
- Ocean Energiean will bid for deep-water blocks in East Med, Africa and West/South Greece



Strategic Cooperations



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Katakolon



Deep Water Exploration

OceanEnergean

Strategic technical partner



Off take agreement



- Lack of Continuity in Ministry Administration
- Validity and clarity of Laws and contracts - Need for “interpretations”
- Environmental laws and conditions – major delays in approvals
- Delays or avoidance of decisions
- Limited technical knowledge and expertise in oil policy & practices
- Delay of VAT reimbursement creates liquidity problems.
- Non existent local banking sector
- No local market support from service companies and oil industry equipment
- Local communities lack awareness and may create problems to E&P companies

Underground Gas Storage in South Kavala

Project characteristics and current status

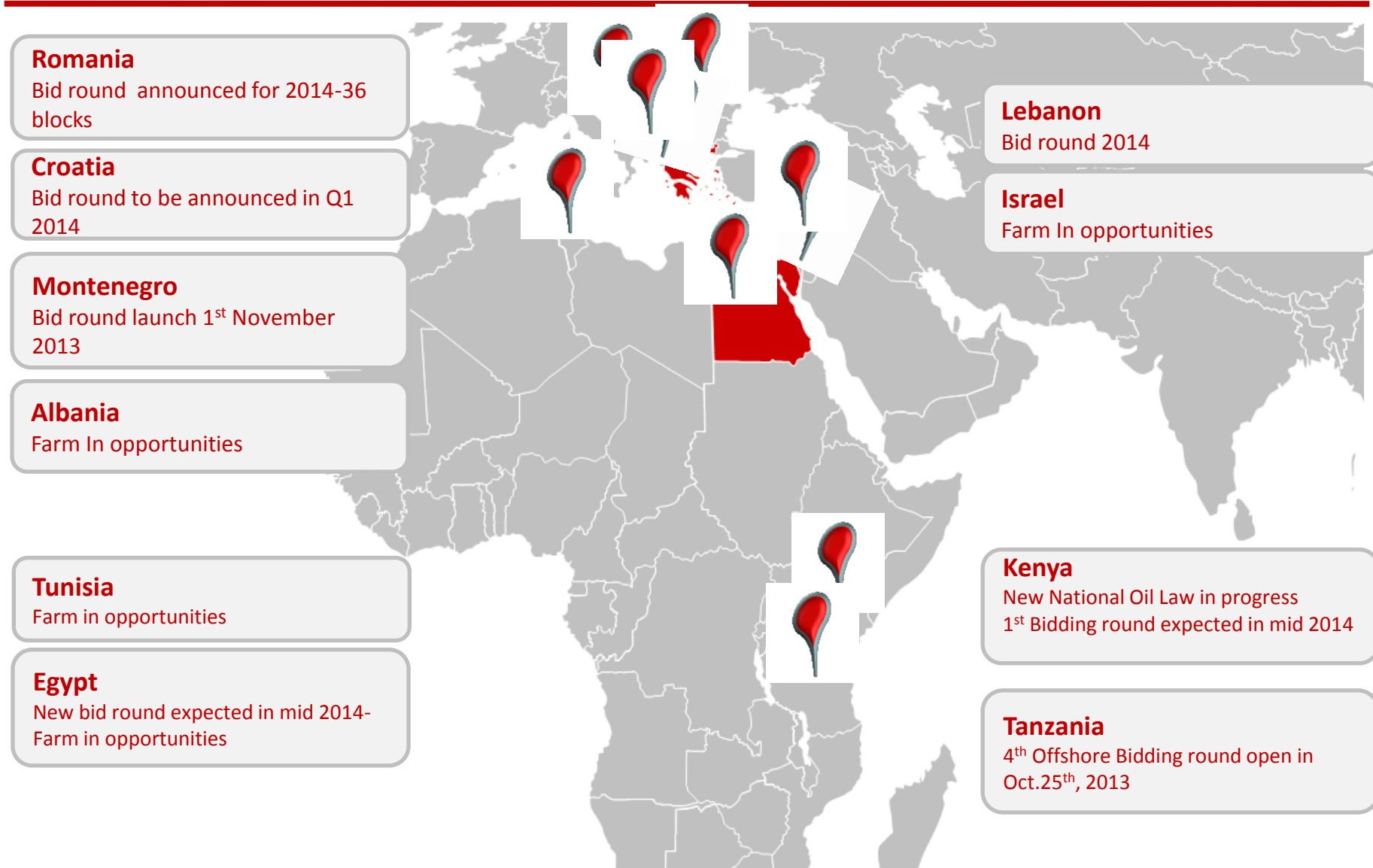
- Energean Oil & Gas submitted to the Greek Energy Regulator RAE an application to convert its South Kavala development license into a UGS license in July 2011
- The EU has granted to Energean as sponsors of the project TEN-E financing (€ 2,75 million grants in total) for the completion of technical and commercial studies: TEN-E 2011 of €1,0million already expired, TEN-E 2012 of €1,75-million extended to September 2014)
- The UGS project has been adopted by European Commission as a Project of Common Interest under the EU Regulation No 347/2013 on Guidelines for trans-European energy infrastructure
- Since November 2011 that TAIPED has the project, no action has taken place

Total Investment: € 400 million

Gas initially in place	1 BCM
Remaining Gas in reservoir	150 MCM
Working gas	530 X 2 MCM
Max deliverability	9 mcm/day
Max injection	7,5 Mcm/day
Cycles per year	2
Max well-head pressure	180 barg
Number of wells	5
Gas pipeline diameter	30 inch



Investing Opportunities in the region



Romania

Bid round announced for 2014-36 blocks

Croatia

Bid round to be announced in Q1 2014

Montenegro

Bid round launch 1st November 2013

Albania

Farm In opportunities

Tunisia

Farm in opportunities

Egypt

New bid round expected in mid 2014- Farm in opportunities

Lebanon

Bid round 2014

Israel

Farm In opportunities

Kenya


New National Oil Law in progress
1st Bidding round expected in mid 2014

Tanzania

4th Offshore Bidding round open in Oct.25th, 2013

- **Remove the “Greek Risk”** – Make exploitation of Natural Resources a National Strategy not affected by political changes
- **Establish HHMC (“ΕΔΕΥ”)** with decision taking authority to promote stability – 30 Years in Cyprus the same team
- Ensure a **Stable Fiscal & Tax regime** with No surprises for Investors
- **Trust the local players** – Where British Gas failed in Israel the local explorers found the Levantine basin
- **Close all three Open Door contracts ASAP** – The international markets are watching
- Resolve any legal/tax inconsistencies and issue permits & licenses on time
- Public sector **MUST** work on **“business” timetables**: When announcements made – **deadlines to be met**
- **Be patient** – 30 Dry Holes drilled in Israel before the first discovery

Time to prove that Greece has the potential by acting and attracting investments so that we do not remain only with the announcements

A photograph of an offshore oil rig at sunset. The rig is silhouetted against a sky with scattered clouds and a bright sun low on the horizon. The water in the foreground is dark with some ripples. The rig has several tall, lattice-structured towers and a central platform. A crane arm is visible extending from the rig towards the center of the frame.

*“The public will not love us for the maps we do,
but only for the oil we discover,
if we will not discover oil competitively we will go
the way of the dinosaurs.”*

Arville Irving Levorsen (1894–1965)
American Geologist