Adriatic Offshore E&P Perspectives
(Adriatic – Ionian Region)

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Agenda

• INA at Glance
• Adriatic – Ionian Offshore E&P Overview
• Institutional and Legislative changes
• New Tenders
• Fiscal Terms
• Challenges for future
INA at Glance

- **388 MM USD EBITDA (INA Group)**
- **~3,65 B USD MARKET CAPITALIZATION (INA)**
- **~213 mmboe 2P Reserves**
- **~41,0 mboe/day total daily production**
- **~ 11,256 employees (INA Group)**
- **2 refineries (RN RIJEKA & SISAK) – TOTAL PROCESSING 3,523 MM t**
Adriatic–Ionian Offshore exploration activities

Exploration activities Adriatic offshore (2006 - 2016)

- In last 10 years period low exploration activity, concentrated mostly in the shallow offshore
- New seismic acquired as a first step to the new exploration cycle in Adriatic region
Proven reserves in total 1.24 B Boe, where most of proven reserves attributed to Italy (could be correlated with long & most successful exploration history in region)

- Resources not impressive in global perspective (~7.1% of EU+Norway oil reserves and ~1.9% of EU+Norway gas reserves), but can play an important role from a regional perspective

- Political stability (low to moderate political risk); EU members or aspiring to EU countries

- Inconsistent policies with respect to E&P business; Cross-border disputes

- Many portions of the offshore underexplored
Biggest Adriatic-Ionian region Offshore producer is Italy; 8.06 % of Total EU Production (gas) & 0.83 % of Total EU Production (oil), followed by Croatia (1.59 % for gas) & Greece (0.17 % for oil).
Adriatic-Ionian region countries enacted various measures to reverse the decreasing offshore activities trend and to comply with EU requirements.

- **Greece, Albania, Croatia, Montenegro** established hydrocarbon agencies and/or relevant Ministry bodies to manage relationship between the government and the companies involved in upstream activities.

- New energy policies and legislative framework have been formulated in order to boost the exploration and exploitation of Adriatic-Ionian region hydrocarbon resources.

- Prerequisite and the basis for new international bidding rounds
ITALY
- From 2013, drilling is prohibited in the Tyrrhenian Sea, in the marine protected areas and in the waters within 12 nautical miles from the coast;
- Concessions approved before 2013 will remain operational

ALBANIA
- Four offshore blocks awarded to Manuelle and San Leon

GREECE
- 2nd offshore Bidround, 2015
  - Government to conclude the evaluation of three recalled offshore bids;
  - Block 2 (TOTAL SA, Edison SpA, Hellenic Petroleum SA)
  - Block 01 & 10 (Hellenic Petroleum SA)

CROATIA
1st offshore Bid Round, 2014/2015
- awarded 10 out of 28 offshore blocks
- OMV & Marathon decided to revoke their bids for 7 blocks
- INA awarded with 25 and 26 blocks, ENI with one block; PSA’s still not signed
- Unofficially, „temporary moratorium” on offshore activities

MONTENEGRO
1st Offshore Bid Round 2013-2016
- Italian multinational firm ENI SPA and Russian gas producer OAO Novatek signed a concession contract with the Montenegrin government for the exploration of 4 offshore blocks
- Energean Oil & Gas SA reached agreement for 2 blocks
- The bidding round inventory included 13 offshore blocks totaling some 3,000 sqkm
Fiscal terms of Adriatic & Ionian region vs. South Mediterranean

Average Undiscounted State Take Under Oil Terms

Proven reserves (Total ≈117 B Boe)

Source: US Energy Information Administration

Source: IHS
<table>
<thead>
<tr>
<th>Country</th>
<th>Type</th>
<th>Royalty</th>
<th>Bonuses</th>
<th>Fees</th>
<th>Taxes</th>
<th>Profit Sharing</th>
</tr>
</thead>
</table>
| Croatia    | Contractual system; Production Sharing Agreement | Vary on the basis of the product type, location (onshore/offshore) and production value; 7-10% if production quota is reached | Signature bonus biddable, production bonus (sliding scales) | Administration fees, Exploration / exploitation area fees | Income tax 20%  
Regional income tax – 3,9% rate (may vary).  
Indirect taxes (e.g. VAT) | Based on the “R-factor”.   |
| Italy      | Royalty / Tax system                           |                                   | -                                            | Different surface fees              | Corporate income tax – 27,5% (may vary, based on company turnover)  
Regional income tax – 3,9% rate (may vary).  
Indirect taxes (e.g. VAT) | Based on Brent value and contractual shares. |
| Montenegro | Royalty / Tax system                           | Oil royalty: progressive rate; range from 5 to 12%.  
Gas royalty: 2 %. | -                                            | Tender application fee, Surface fee      | Corporate profit tax for upstream companies, Extra profit tax, Upstream Industry Tax | Based on the “R-factor”.   |
| Egypt      | Contractual system; Production Sharing Agreement | Generally, 10%.  
The rate may differ depending on each agreement. | Signature/ development lease/ development lease extension/ assignment/ training/ production bonuses | -                                  | Corporate income tax, Capital gains tax, different indirect taxes... | Based on Brent value and contractual shares. |
| Tunisia    | Two main types of contract operating: Concessions and Production Sharing Agreement | Sliding scale, based on R-factor: range 2-15%. | -                                            | Registration fees                  | Corporate Income Tax (depending on R-factor), turnover taxes, local taxes, different indirect taxes, VAT... | Based on the “R-factor”.   |
After Oil Price peak in 2008 (above $145) there is a big challenge for Oil companies to find a way for operating in much lower oil price environment!
### Deep Adriatic Project’s Economic Simulation

**ERR 190 MMboe**

<table>
<thead>
<tr>
<th></th>
<th>Expected</th>
<th>Unrisked</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NPV</strong></td>
<td>USD -133,3 mln</td>
<td>USD -52,6 mln</td>
</tr>
<tr>
<td></td>
<td>-4,2 USD/boe</td>
<td>-0,3 USD/boe</td>
</tr>
<tr>
<td><strong>IRR</strong></td>
<td>4,6%</td>
<td>9,3%</td>
</tr>
<tr>
<td><strong>PI</strong></td>
<td>0,66</td>
<td>0,97</td>
</tr>
<tr>
<td><strong>Payback</strong></td>
<td>no payback years</td>
<td>no payback years</td>
</tr>
<tr>
<td><strong>Disc. gov. take</strong></td>
<td>25,2%</td>
<td>24,9%</td>
</tr>
</tbody>
</table>

- NPV - Breakeven price (2017): 60,2 USD/bbl
- NPV - Breakeven price 87,1 USD/bbl

**Inputs:**
- 3D seismic
- exploration wells
- appraisal wells
- development wells
- Surface facilities (FPSO + subsea + pipelines)

**OPEX(real):** 20 USD/bbl
### Economic Analysis – Mediterranean region

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>CROATIA</th>
<th>MONTENEGRO</th>
<th>ITALY</th>
<th>TUNISIA</th>
<th>EGYPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPV (MM USD)</td>
<td>146,9</td>
<td>96,0</td>
<td>189,1</td>
<td>77,4</td>
<td>-108,5</td>
</tr>
<tr>
<td>ENPV (MM USD)</td>
<td>1,7</td>
<td>-7,5</td>
<td>-6,6</td>
<td>-10,8</td>
<td>-108,5</td>
</tr>
<tr>
<td>IRR</td>
<td>20,74%</td>
<td>19,15%</td>
<td>21,96%</td>
<td>21,90%</td>
<td>2,70%</td>
</tr>
<tr>
<td>PI</td>
<td>1,71</td>
<td>1,48</td>
<td>1,91</td>
<td>1,41</td>
<td>0,43</td>
</tr>
<tr>
<td>PAYBACK (YEARS)</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>DISCOUNTED PAYBACK (YEARS)</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>GOVERNMENT TAKE</td>
<td>37,54%</td>
<td>42,22%</td>
<td>31,95%</td>
<td>38,99%</td>
<td>62,00%</td>
</tr>
<tr>
<td>DISCOUNTED GOVERNEMENT TAKE</td>
<td>33,47%</td>
<td>37,30%</td>
<td>29,78%</td>
<td>31,27%</td>
<td>62,19%</td>
</tr>
<tr>
<td>COUNTRY RISK</td>
<td>200</td>
<td>300</td>
<td>150</td>
<td>600</td>
<td>600</td>
</tr>
</tbody>
</table>

Premises 40 – 80 $/bbl
ERR= 25 MM bbl
POS 20%
Oil 36° API

**INPUTS:**
- 3D seismic
- 1 exploration well
- 1 appraisal well
- 5 development wells
- Surface facilities

- Fiscal terms and country risk are factors of a significant influence on financial indicators (Croatia vs. Tunisia similar cash flow)
- Under current oil price (47 $/bbl) analyzed offshore projects are marginally profitable
Challenges for the future

• In the last 10 years period low exploration activity in Adriatic – Ionian region

• Favorable fiscal terms and new Legislative & Institutional framework of reviewed countries (Croatia, Greece, Montenegro, Albania etc.) without success after oil price breakdown; until today no new drillings

• Current oil price environment (~ $45, 2016 average) not supporting deep offshore drillings (most of the reviewed deep offshore projects are floating on the profit margin), and are highly dependent on the fiscal terms and country risk

• In Mediterranean region, giant/deep offshore projects with less favorable fiscal terms compared to Adriatic-Ionian and relatively higher country risks are viable.

Change in Adriatic-Ionian Exploration Projects life cycle could be expected upon the Oil Price recovery!
Thank you!!!