REMPEC - 1st Offshore Protocol Working Group Meeting

OFFSHORE REGULATION AND PRACTICE IN ITALY

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Introduction: E&P activities

Organization chart – Ministry, Directorate General and UNMIG

The Marine Zones

The licensing

The HSE regulation and approach: the emergency and “black box”

Effectiveness of Italian safety regulation

Conclusions
E&P Activites in Italy @ 30/04/2013

- 105 offshore platforms
- 8 platforms supporting the production
- 2 FSO + 1 FPSO
- 932 wells (566 onshore, 366 offshore)
- 200 production licenses (134 onshore, 66 offshore)
- 117 exploration permits (95 onshore, 22 offshore)
- Hydrocarbons production 2012: 5.37 milion tons of oil (~9% offshore)
  8,530 milion Sm³ of gas (~70% offshore)
- 59 operators (2 offshore: ENI, Edison)
- >100 service companies and 12,000 employees
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Organization Chart of the Directorate

Directorate General for Mining and Energetic Resources

Staff

- Chemical Laboratories
- Statistics, cartography and computerization
- Hydrocarbons Research and Exploitation Concession
- Gas Storage and Carbon Dioxide Storage
- Expropriation, Contacts with local authorities

UNMIG Offices
The *Ufficio Nazionale Minerario per gli Idrocarburi e le Georisorse* Offices

UNMIG main tasks:
- technical and administrative management of E&P activities
- safety coordination and control carried out by regions and local authorities
- relationships with international and UE bodies
- suitability of explosive products in mining activities;
- tests on the physical parameters affecting safety (e.g. soil vibration, noise)

This supervisory authority (UNMIG) has the power:
- to independently organize any specific *inspections and verification* and testing equipment and mining equipment
- to **suspend or prohibit** any work considered unsafe or dangerous;

UNMIG Inspectors are Official of the Judicial Police and are responsible for their activities only directly to the Judicial Authorities
The *Ufficio Nazionale Minerario per gli Idrocarburi e le Georisorse* Offices

Activities carried out by UNMIG (2012):

- 219 inspections of production
- 4170 tests of pressure equipment, lifting apparatus, …..
- 181 inspections of drilling rigs/production
- 1,874 inspections for other purposes

In addition, the UNMIG granted in 2012 the following permissions:

- 24 permits for geophysical activities
- 135 authorizations for well drilling and mine closures
- 135 permits for start working on existing plants
- 102 authorizations for new plants
- 639 other permissions
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Italian Offshore Zones open to Hydrocarbon E&P

Marine Zones:
- A
- B
- C
- D
- E
- F
- G

Marine Zones are established with international agreements and ministretrial decrees in the area under the Italian jurisdiction.
Within the Marine Zones, there is the prohibition for oil and gas research in offshore areas located within 12 nautical miles from the outer limit of the marine and coastal protected areas.
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Italian oil & gas resources

Government carries out safety tests to ensure full compliance with rules and procedures of the upstream hydrocarbons activities. Operator’s technical-economical experience is previously checked.

Private Companies receive from the State the right to explore and develop, financing 100% of exploration and development costs.

Offshore oil and gas prospecting, exploration and exploitation in areas (territorial sea and continental shelf) fall under the national jurisdiction.

Unavailable State assets.
The licensing

Italy adopts the “Concession System” or “Licensing System” and it is structured into 3 different licenses:
- prospecting permit
- exploration license
- production license

All the Projects are:
- evaluated pursuant to Directive 94/22/EC;
- screened including technical and financial capability of the applicants;
- subjected to an Environmental Impact Assessment (EIA) carried out by Ministry of Environment as competent for waste and harmful or noxious substances and materials.

For the Offshore Activities, Ministry of Economic Development (MSE) is the licensing Authority.
The licensing

1. Official Hydrocarbons Journal
2. Environmental Impact Study
3. Governative Conference
4. Environment Ministry
5. EIA Rejection or No Regional Agreement
6. NO Concession
7. EIA issuing & Regional Agreement
8. Concession
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E&P Safety regulatory framework

- Directive 92/91/EC  
  H&S in drilling activities

- Directive 92/104/EC  
  H&S in extractive industry

- IT transposition

- Legislative Decree no. 81/2008

- Legislative Decree no. 624/1996

- Directorial Decree 22/03/2011

DGRME - Ministry of Economic Development:
  - monitoring of the application;
  - supervisory functions.
The Health and Safety Document (DSS)

The DSS (Legislative Decree no. 624/1996) must contain the workers’ health and safety risk assessment, the consequent identification of measures and operating procedures, it indicates the solutions adopted for a variety of items shown in the Decree and must also contain information relating to:

a) the workers’ information and training activities;
b) the work safety representatives’ consultation.

Among the operator’s single duties, there are:
- updating the DSS, if the workplace has been substantially changed or after a major accident;
- sending the DSS to the supervisory authority, before starting the activities;
- schedulating periodical meetings, with the participation of workers’ safety representatives.
The Health and Safety Document (DSS): the “acceptance”

The supervisory authority (UNMIG Office) carries out a check of the DSS received, in terms of completeness and compliance with the requirements.

so...

It is up to the licensee to comply and ensure the compliance of the laws and regulations concerning the safety and health protection of workers.

Any infraction will be prosecuted with monetary sanctions and complaints to the competent judicial authority.
And in case of an accident!?!??

ACCIDENT

HSE Tasks
(by MiSE side)

COMUNICATION FLOW

Environment and disaster management
(the other public entities)

EMERGENCY RESPONSE PLANS
- Operating Emergency Response Plan
- National Emergency Response Plan
Injuries due to fire, explos., blowout, death or injuries with diagnosis >30 days

YES

instant communication by HSE Director

notification + detailed report [within 24 h]

NO

 Monthly summary report by Licensee

Each event with an absence from workplace >= 3 days
[within 15 days following the month of accidents occurrence]
Accident reporting format in offshore and onshore activities: communication flow (MONTHLY REPORT to MiSE)

Owner (Licensee) of hydrocarbons explor./product. site → U.N.M.I.G. North Italy

Owner (Licensee) of hydrocarbons explor./product. site → U.N.M.I.G. Center Italy

Owner (Licensee) of hydrocarbons explor./product. site → U.N.M.I.G. South Italy

Ministry of Economic Development
Directorate for mining and energy resources
Div I Computerization, cartography, statistics and royalties
Environment and disaster management

Operating Emergency Response Plan (MATTM-Coastal Guard)

National Emergency Response Plan (Civil Protection)
Unalterable and protected data recording system: “black box”

Following to “Macondo”:

Directorial Decree 22/03/11 - Art. 28 par. 10

“...the licensee establishes a system for an unalterable and protected information data recording for drilling parameters ...”

Directive on safety of offshore oil and gas operations and amending Directive 2004/35/EC - Art. 19 par. 10

“...Member States shall ensure, where appropriate, that operators take measures to use adequate technical means or procedures in order to promote reliability of the collection of details of the drilling parameters’ records and prevent possible manipulation thereof”
Unalterable and protected data recording system

Before the introduction of the above mentioned decree, the recording data system was already in place during the offshore drilling activities. (Mud Logging Unit - MLU)

What’s new?

An acquisition-transfer-saving data system on an onshore server is now active.
Unalterable and protected data recording system

The idea:

✓ data Transmission via satellite connection (certified for 99.5% up time);
✓ every 5 secs or 20 cm depth, Mud Logging Unit (drilling site) sends data contemporarily to the **Contractor** DATA FARM (Ireland and USA for *Baker*, France for *Geolog*) and to the **Operator** dedicated DATA FARM (2 servers in parallel for each Contractor - data acquisition every 10 secs);
✓ **high protection levels** against external violation;
✓ **secure data transmission thanks to coded protocols**

![Diagram of data transmission system](image)
Unalterable and protected data recording system

To perform the idea:

✓ we are discussing within the EUOAG (EU Offshore Authorities Group)
✓ we are leading the operational stage on the offshore installations
✓ we are studying possible synergies with the “black box” of the merchant ships and aircraft
✓ we are involving Coastal Guard and ITC market sector leaders.
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Effectiveness of Italian safety regulation 1/2

Blow out
European index: 1.88 /1,000 offshore drilled wells
Italian index: 1.22/1,000 offshore drilled wells.

LTIF – Lost Time Injury Frequency (2011)
Global: 0.43
European: 1.08
Italian: 1.55  \( \leftarrow \) Data referred both to offshore and onshore activities!!!

Our Ministry is encouraging the operators to identify and correct possible problems within the drilling activities, with particular reference to load handling and assembly/disassembly of equipments activities.

All this for a constant and continuous increasing of worker safety.
The positive effects originated are emphasized even more from the comparison between the injury rates related to 2012 and historical data:

### DRILLING

<table>
<thead>
<tr>
<th>Year</th>
<th>Meters</th>
<th>Incidents</th>
<th>Aggregate index [incidents/meter]</th>
<th>Variation compared to 1995</th>
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<tbody>
<tr>
<td>1995</td>
<td>137565</td>
<td>121</td>
<td>$8.80 \times 10^{-4}$</td>
<td>-66%</td>
</tr>
<tr>
<td>2009</td>
<td>80521</td>
<td>24</td>
<td>$2.98 \times 10^{-4}$</td>
<td>-76%</td>
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<tr>
<td>2010</td>
<td>56640</td>
<td>12</td>
<td>$2.12 \times 10^{-4}$</td>
<td>-74%</td>
</tr>
<tr>
<td>2011</td>
<td>55810</td>
<td>13</td>
<td>$2.33 \times 10^{-4}$</td>
<td>-58%</td>
</tr>
<tr>
<td>2012</td>
<td>51476</td>
<td>19</td>
<td>$3.69 \times 10^{-4}$</td>
<td></td>
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</table>

### PRODUCTION

<table>
<thead>
<tr>
<th></th>
<th></th>
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<td>1995</td>
<td>20,4</td>
<td>5,2</td>
<td>21,5</td>
<td>125</td>
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<tr>
<td>2009</td>
<td>7,9</td>
<td>4,5</td>
<td>10,8</td>
<td>27</td>
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<td>2012</td>
<td>8,5</td>
<td>5,4</td>
<td>12,2</td>
<td>15</td>
</tr>
</tbody>
</table>
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Conclusions and next steps

Offshore Protocol and Offshore Directive “could be a useful tool to provide the Countries bordering the Mediterranean Sea with an uniform and advanced regulation.”

Why not take the chance to suggest the opportunity of setting up within the REMPEC of a working group composed of the representative of the CA to develop and harmonize the offshore regulatory framework in the mediterranean?
Italian (main) normative references

Licensing
- Royal Decree 29/07 1927, n. 1443
- Law 11/01/1957, n. 6
- Law 21/07/1967, n. 613;
- Decree of the President of the Republic 24/05/1979, n. 886
- Law 9/01/1991, n. 9;
- Legislative Decree 25/11/1996, n. 625;
- Law 20/08/2004, n. 239;
- Ministerial Decree 4/03/2011;

HSE
- Decree of the President of the Republic 9/04/1959, n. 128
- Legislative Decree 25/11/1996, n. 624;
- Legislative Decree 3/04/2006, n. 152;
- Legislative Decree 9/04/2008, n. 81;
- Legislative Decree 22/03/2011.
Thanks for the attention!

Ministry of Economic Development
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