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OMC 2015
QUOTIDIANO ENERGIA
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OMC, from 2015 onwards: the look into the next twenty years

Innocenzo Titone, chairman of the event, talks about four energy-related challenges: "Security, availability, sustainability and stability". And what about the efficiency? It is a "wide-ranging" subject of the event

The message of the 2015 edition of OMC is "Focus on change: planning the next 20 years. Diversifying choice, increasing opportunities." A look into the future which begins from the complex contemporary scenario and embraces the aspects of energy security and geopolitical balance. In the heart of the Mediterranean, which now, more than ever, may tip the balance towards a great deal of possible developments.

What are the challenges that emerge from that look into the near future?

The challenges of the energy-related scenario center around four key words that are: security, availability, sustainability and stability. On the one hand, it is necessary to respond to the global oil and gas demand that is bound to increase (the outlooks indicate 111 million boe by 2040, with other 21 additional million boe compared to 2013). On the other hand, oil companies and governments must ensure that energy sources are available in a safe and environmentally friendly manner. This may occur only in the presence of the market stability, which can be ensured, as Secretary General of the OPEC Abdalla el Badri has underlined recently, only in the presence of the market stability guaranteed by a continuous and constructive dialog between producers and consumers.

Investments in the oil sector, by their very nature, entail decision making based on more and more complex and high-risk variables and therefore only in this scenario the necessary and substantial investments may be made, thus enabling us to deal with the demand growth expected by energy outlooks made by the majors.

In this respect it will be interesting to listen to the speeches at the plenary session on March 25, that will be attended by representatives from Mediterranean countries and top executives of the oil industry.

Three big "game changers" who have revolutionized the market are: the unconventional hydrocarbon development, particularly in the U.S. and Canada; the geopolitical questions that agitate numerous regions in the world; and the fall in LNG prices. What further effects will we observe in Europe?

The general geopolitical situation (North Africa, Russia-Ukraine) has

cast serious doubts on the supply security. On the other hand, the development of the unconventional segment has provided such high availability of resources that it has brought about a dramatic fall in oil prices and the ensuing slump in investments.

Realistically speaking, Europe cannot do without importation of

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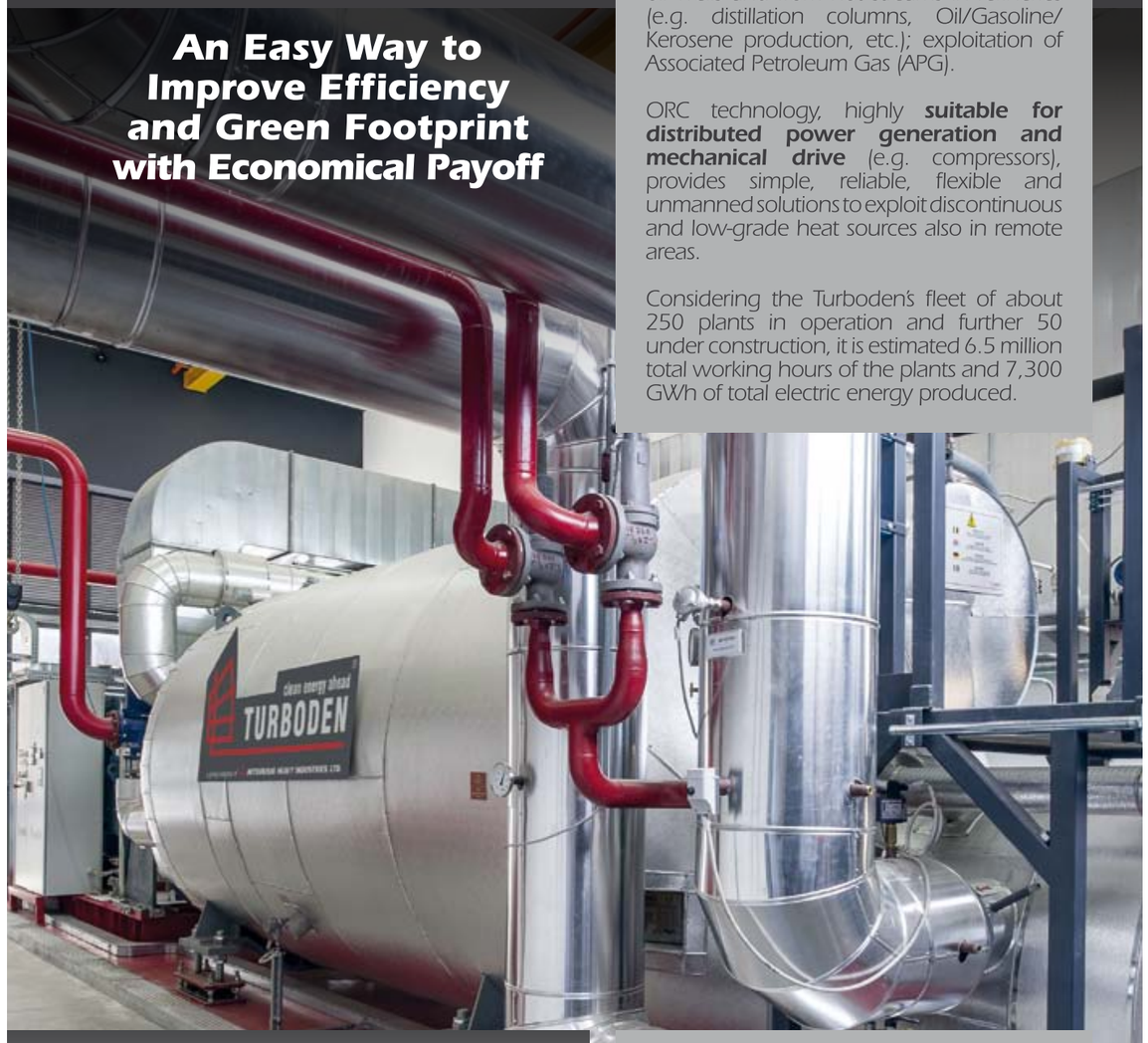

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hydrocarbons. Therefore it is crucial that the countries of the European Union encourage domestic production in that they search for new resources, maximize production in the existing reservoirs, and improve the energy efficiency and balance diversification of the primary energy mix at the same time.

As for Italy, it is one of the richest European countries as regards the energy potential of hydrocarbon reserves. Some of the resources, such as those in the Adriatic Sea, have already been prospected, the other ones are yet to be prospected. This is mainly offshore potential, although for the time being, it is neither searched for nor optimized. It is a pity, as the district of Ravenna shows how its activities, started in the fifties, in a period of over fifty years have brought about economic prosperity, industrial and employment growth which was perfectly compatible with the specific features of the area: agriculture, tourism and cultural heritage. Ravenna has become an example of sustainability and compatibility of different activities thanks to transparent cooperation with all the stakeholders.

How has the event changed with respect to the previous edition and what does it focus on? It appears that besides classic topics the matters of energy efficiency and sustainability are much discussed.

OMC has become the most important conference on oil&gas in the Mediterranean area. This year's edition is held at a time not easy for the global energy market and OMC will attempt to respond to numerous topical questions.

The new issues this year will also include workshops and special sessions: "Enhanced Oil Recovery (EOR)", a technology that plays a fundamental role in the Industry, dealing with methods development, deployment and full field application, and "Offshore Regulations and Technologies" which will analyze the regulatory, legal and technical aspects of the offshore activities.

The issue of energy efficiency is wide-ranging and it will be examined at a great deal across the 34 technical sessions which make up the comprehensive program of the 2015 OMC.

Is presently the reflection on regulation of crucial importance?

As I mentioned, the topic of the offshore activity regulation will be widely discussed at the special session entitled "Offshore Regulations and Technologies: 5 years after Macondo." The 2011 edition offered the possibility to analyze the disaster in the Gulf of Mexico and discuss causes and possible solutions. This year in turn will be the time to sum up what the governments and the companies of the sector have put in place so that "another Macondo" would never repeat again.

High representatives from three countries of the Mediterranean region involved in the offshore activities (Croatia, Cyprus and Italy) will take the floor at the session, in order to present how the European directive on safety has been implemented and applied. The session will be introduced by Marcelo Masera, EC Head of Unit Energy Security, Joint Research Centre Institute.

And from the point of view of technology innovation and research?

In order to respond to market's increasing demand for energy in particular, operators are widely interested in technology innovations that will be discussed at workshops attended by high-profile scientists and professionals. One of them, among numerous others, will be Ruben Juanes, Professor at the Massachusetts Institute of Technology in Boston.

Moreover, this year's technical program focuses specifically on the offshore and new technologies related to the E&P processes. The offshore has already become the key activity in the oil sector and it requires increasing safety standards which only high technology innovation may ensure.

Also this year young people will be given a chance to contribute in the form of a dedicated contest. How can they contribute to the segment?

The previous editions offered meeting opportunities for university students and the sector's companies. We are planning to do this also in the course of the present event. Moreover, in order for young graduates, or undergraduate students, to become more visible, we have arranged a "5 minute speech contest." The response was very positive and out of the works received, we selected 21 young people who will have an opportunity to make a name for themselves. We would like to offer visibility to young people, because the industry needs those who reveal a proactive approach and are capable of dealing with various issues.

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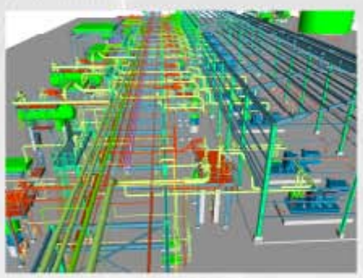

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The challenge of technology

A realistic regulatory framework is necessary. Interview with Mario Augusto Chiaramonte, chairman Programme Committee OMC 2015

When planning 34 technical sessions of this year's OMC, you had the possibility to analyze from a position of "privileged observer" all recent findings on the global upstream. Which of the predominant aspects does the industry address?

The subjects do not change much over time. They include: higher recovery of hydrocarbons from the deposits through better use of the already selected resources, faster and safer well drilling, as well as more efficient, above all deep-water oil and gas production. The upstream technology is a mature technology the further improvement of which requires a significant, expensive and long-term effort. For this reason, topics are still the same.

Last year was marked by a sudden drop in oil prices. What was the impact on the E&P evolution in terms of cost containment and operations streamlining?

One of the main issues related to the technology innovation in the oil sector has always been the containment of operational expenses which are always very high due to the industry's technical complexity. It is obvious that the current low price quotes for crude oil exacerbates the need and the impulse to innovate in order to further reduce the expenses by increasing the efficiency and finding original solutions.

The issue of innovation is linked to the regulatory environment. Does the regulation just slow down the development of new technologies or can it be also seen as a driving force for research?

The regulatory framework, if it is rational and realistic, is necessary and it can only stimulate fine-tuning of new technologies which meet the requirements of the industry and are complaint with the legal provisions at the same time. I think that at the session regarding the changes five years after the Macondo spill, scheduled for the last day of the OMC, we will hear credible reports on the technological progress made precisely after that event.

In recent years old paradigms of the oil industry have been shattered by the "unconventional revolution". Can the technical progress that we are observing lead to another discontinuity of such a dimension?

The development of the unconventional segment in the U.S. is an exceptional fact which has seen the confluence of a great deal of favorable, not only technology-related factors. Technological discontinuity which befits from the progress in other research fields is possible, or even probable, but it is hard to comprehend how deep and fast impact it will have on the oil business.

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The City welcomes the OMC 2015

"We are proud to host the 12th edition"

Ravenna is proud to host OMC again. From 1993, every two years, the international fair of the offshore brings prestige to the place which becomes the capital city of energy, promoting the debate and offering possibilities to exchange expertise on the matter which is crucial for the future of the world.

This year 34 nations and over 600 oil companies are involved. These figures confirm a growing interest for this event, which is one of the most recognized worldwide. The subject of the 2015 edition centers around planning for the next twenty years, emphasizing the need to diversify the choices of energy supplies in order to increase opportunities.

Ravenna takes part in this event as a strongly "involved" interlocutor, able to put in place its ideas and competences. The area of Ravenna is indeed a territory where in the recent half a century energy policies and distribution as well as environmental policies have played an important role in the economic development as regards business and employment. Ravenna is the seat of important companies dealing with energy production, such as ENI and ENEL, besides the offshore sector. This creates a unique mix of enterprises and professionalism.

This year the "core" of the event offers the possibility to reflect on a matter, which in my opinion is very interesting, that is on that sector of strategic importance both from the economic point of view and for the individual quality of life.

I would like to underline another aspect of the 2015 edition of the Offshore Mediterranean Conference, namely: the talent promotion. The twenty-one finalists selected from over sixty young people, students enrolled in M.A. and Ph.D. programs at fourteen Italian and four foreign universities, who have presented their work on the subject of "Technologies to meet the future energy needs", on the occasion of this OMC, will make a direct contact with the companies. It is not an insignificant opportunity, if we consider the chronic difficulty in finding a positive synthesis between the degree programs and work where the merit and competences are rewarded.

I would like to welcome all the delegations from different countries which will stay in our city for this very important meeting. I would also like to welcome the representatives of the companies. Last but not least, I would like to welcome all the distinguished speakers at numerous meetings that will stimulate the event also this year.

Ravenna will do its utmost to make you feel at home. Best regards and have a nice stay in our beautiful city.

Fabrizio Matteucci, Mayor of Ravenna

Upstream, benefits for Ravenna

"The target of internationalization achived"

Due to a much lower oil price than in the past, also the oil&gas sector has been going through a tough time. The 2015 edition of the Offshore Mediterranean Exhibition thus comes in a particularly important moment. Government representatives of the oil producing countries and the companies operating in the sector of hydrocarbons will have the possibility to exchange expertise and consider the timeline by which the price per barrel can rise. This increase is actually related with the recovery of investment.

The industry related to the hydrocarbon extraction sector in Ravenna has grown owing to the activity of ENI, which has conducted operations in the Adriatic Sea since the 1950s. From then on, the companies based in Ravenna have developed in the international markets, they have specialized in the construction of platforms, oil and gas pipelines, assistance offered to the extraction plants and construction of support vessels.

The companies based in Ravenna from the offshore sector operate in numerous foreign countries: North Africa (Algeria, Tunisia, Libya, Egypt), the Mediterranean region (Turkey, Greece), or West Africa (Congo, Angola, Nigeria). Activities are conducted in Latin America (Brazil and Mexico), and obviously in Kazakhstan, where ENI plays a leading role.

Twenty years ago, when talking with ENI and other local Institutions on the idea of bringing the Offshore Mediterranean Conference & Exhibition into being, the Chamber of Commerce set as the primary target precisely the internationalization of the production system. Now, already at the 12th edition, we can say that this objective has been achieved to a large extent.

It is not a coincidence that at this year's OMC the number of exhibitors and foreign delegation increases and the inauguration is attended by very important international authorities. This event produces a twofold effect: it makes known Ravenna and its eight monuments included in the UNESCO's World Heritage List famous throughout the world and it generates added-value for hotels, public facilities, artisans and businesses.

Certainly, it will be the occasion to strongly highlight the need to resume exploration activities also in Italy and particularly in the Adriatic Sea. Institutions, trade associations and entrepreneurs have signed a document in which they expect the national bodies to engage again in the oil&gas sector, because our companies operate through the use of the state-of-the-art technology, paying full regard to the issue of safety.

Natalino Gigante, President of the Ravenna Chamber of Commerce

The Italian oil&gas industry is export-oriented

The implication of the oil price drop. Interview with the president of ROCA, Franco Nanni

ROCA, the Ravenna Offshore Contractors Association, is an originator of the OMC. What were the beginnings and how did it evolve into a fair in Ravenna?

A group of the sector's entrepreneurs from Ravenna established ROCA in 1992, with the aim of organizing in 1993 the first OMC (Offshore Mediterranean Conference and Exhibition). Then, ROCA, CCIAA of Ravenna and Assomineraria founded a company in order to organize the OMC.

How many enterprises do you associate and which sectors do they represent?

ROCA has 36 associate enterprises that operate in the oil and gas sector. A great deal of them were established in the 1960s when the exploration and production activities offshore Ravenna had begun.

The activities cover all sectors: from engineering to platform construction, from underwater to mechanical works, from maintenance to electrical works, etc.

What are the current and future activities of ROCA?

ROCA deals with promotion on behalf of its partners. Besides dealing with the organization of OMC, held in Ravenna every two years, ROCA take part in the main sector's fairs, arranges for meetings, foreign missions and workshops with a view to presenting the activities of the associated enterprises.

The activities of ROCA have contributed to the internationalization of its associated enterprises and above all, we have raised awareness of new employment opportunities.

The current lower oil prices seriously reduce the industry's activities. Therefore, ROCA will focus its own activities on promotion. The 2015 OMC will be definitely a great showcase for the operators in the offshore and generally oil and gas sector and presentation of their companies and the technologies in the relevant segments. Oil and industry ministers of the Mediterranean region and the CEOs of the main oil companies will attend the conference with a view of getting an indicator of the next investments.

You have mentioned about the crisis in the sector. What do you mean by that?

The oil price drop certainly brings huge advantage to the transportation, the oil refining industry and the industry in general. In addition, the oil price in Italy has shrank by 10%, whereas for instance, in the U.S. a 30% drop has been observed (average price in Italy in 2014 €/l 1.750, in 2015 1.575 €/l – in the U.S. 3.36 and 2.33 $/gallon respectively).

Italy may save on oil import almost €13 billion within a year, considering a reduction of around €24 per barrel.

However, there is the other side of the coin. A $40 drop per barrel means lower revenue of oil producers which is translated into a loss of around €3.5 billion a day and around $1,300 billion a year. This in turn entails fewer supplies to the producing countries and the oil companies, which obviously have to reduce their investment budget due to lower earnings.

For this reason, the companies operating in the oil&gas and energy sectors see 2015 as a year of downturn, due to the cancellation of numerous already planned projects.

Italian enterprises in the oil&gas and energy sector have been oriented to foreign markets for years. The reason for this is that the number of projects in Italy has diminished a great deal, as the exploration and production of low gas volumes we have in Italy have been suspended. Moreover, the bureaucratic procedures and the regulations related to permission and concession granting take long which shays away the investors from Italy. We lack for nothing: the customary phenomenon of NIMBY (Not in My Back Yard) has been followed by similarly dangerous called NIMTOO (Not In My Term Of Office) which ensues exploitation of specific infrastructure for political and electoral ends. Now Italy is in a phase of BANANA that stands for Build Absolutely Nothing Anywhere Near Anything.

L.T.

The oil&gas services sector and the oil price crunch

Interview with Saipem senior vice-president Business & Technology Development, Daslav Brkic: "Comfortable thanks to a €22.1bn project backlog and a strong utilization rate of our fleet". The importance to promote growth in the local economy

In the context of the oil price drop and to the deterioration of the oil & gas industry scenario which occurred in the last 8 months, what has been the most significant challenge for Saipem's Engineering & Construction and Drilling business?

With oil companies revising their investment plans downwards for 2015 - typically cutting between 5 and 20 % of capex – the oil services sector will undoubtedly face pressure. In this context, however, Saipem is relatively well-positioned.

Firstly, we have a comfortable backlog of projects worth €22.1bn, equivalent to almost two years of revenues. And so far, no contract awarded to Saipem has been cancelled.

Secondly, in terms of drilling, both our onshore and offshore fleets currently have strong utilization rates. The onshore fleet rate is 96%, mainly with long-term clients. And the offshore fleet is currently negotiating a number of contract extentions which would ensure strong utilization rates for the next two years.

Thirdly, Saipem has a unique position in several areas of the oil services segment thanks to its competences, technologies, assets and experience – for instance in deepwater, floaters, pipelines, and refining megaprojects, as evidenced by the recent award of the contracts for the Egina field in Nigeria, Kaombo field in Angola, the Kashagan pipelines in Kazakhstan and the Jazam gasification complex in Saudi Arabia.

What do you think is the most efficient contracting model in today's oil & gas industry: the so-called "best-in-class" strategy, that implied that on a single project there could be several relatively small contractors and suppliers, or the Engineering, procurement and construction (Epc) or Engineering, procurement, construction and installation (Epci) models?

In our view, the best contracting model to use depends on the type of project, the historical preferences of clients, the geography and location, sophistication and availability of contractors and suppliers, the technologies which need to be employed and so on. Different situations require different contractual forms, and of course Saipem is comfortable with any contractual form employed in the market today.

That said, the discipline of EPC or EPCI LSTK contracts has in many cases resulted in excellent performances and the completion of the project within the estimated time and budget. That's because the alignment and coordination of several contractors performing in parallel a number of smaller contracts can be a major and costly challenge.

In situations where the project might require a long time to be defined, in Saipem's experience the hybrid, "convertible" contracts can offer several advantages: during the early project stages, when the client evaluates alternatives and performs value engineering and optimization, a reimbursable contractual form can offer the required flexibility; once the project is well defined, some engineering performed, critical orders are placed and the contractor and the client have a clear view of all the challenges, then the contract could be 'converted' into a LSTK form, to take advantage of its self-imposed discipline until project completion. Cooperation and confidence are essential requirements in this contractual arrangement.

How would you describe Saipem's relationship with local companies and subcontractors?

Saipem's capacity to "be local" - promoting the local socio-economic growth in the contexts in which we operate - is a key differentiating factor for our company. We offer unique opportunities for local employment, training and local suppliers, especially in strategic countries where we have a long-term business presence.

The development of local partnerships is just one of the ways in which we do so. Examples include Ersai, a joint venture with a local entrepreneur in West Kazakhstan, Petromar with Sonangol in Angola and the Star fabrication yard in Saudi Arabia.

In terms of local procurement, one important objective is to promote the growth of the local economy. To ensure this happens, we transfer to our vendors and sub-contractors know-how and technologies, quality management systems and an enhanced HSE and social responsibility culture. We have also decentralised the qualification process in order to facilitate local vendors. This comprehensive approach supports integration with local market conditions.

Do you think the Mediterranean countries, and Italy in particular, have the correct regulatory and taxation systems in place to stimulate oil and gas production?

That's a good question for oil companies, our clients. All we can say is that Saipem has a 70-year track record in many Mediterranean countries, with hundreds of pivotal achievements onshore and offshore, in terms of production facilities, gas transportation systems, refineries and petrochemicals plants.

Currently, in Italy Saipem has virtually no activities in the upstream sector, and nor do we see significant activities being carried out by our competitors. In downstream, it has completed the construction of Eni's EST plant in Sannazzaro, supporting the development of a revolutionary technology for the full conversion of the barrel to produce high-quality fuels. Furthermore numerous other projects are underway in North Africa such as the Subsea Field Development project for Burullus Gas Company in Egypt.

Could you give us a summary of the session you will be covering at the OMC conference and of the events taking place at your stand?

Saipem sees the OMC conference as an ideal opportunity to highlight its latest technological innovations, particularly in the fields of deep and ultradeep water developments, and safety.

We will be involved in a number of sessions, including one on megaprojects in ultra deepwater where Saipem will provide a comprehensive overview of the installation challenges and optimal ways to tackle them, with special focus on the oil or gas transportation needs and pipelaying technology, and a key one on the special 'Post- Macondo' workshop on the last day, describing Saipem's execution of the 'Subsea Well Response Project' on behalf of a group of major international oil companies.

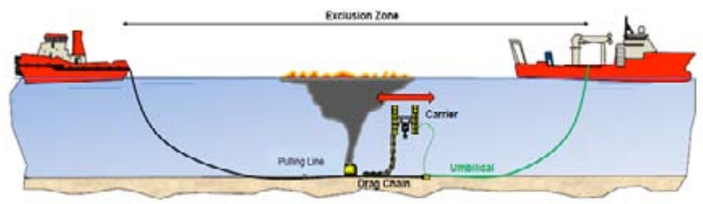
Luca Tabasso

The Offset Installation System

Saipem has been chosen by the Subsea Well Response Project Consortium, a group of 9 world largest IOCs led by Shell, to develop and produce an intervention system to cap or contain oil leaks following any potential Macondo-type BOP explosion.

The Offset Installation System (OIS) designed by Saipem will carry out debris clearance, dispersant injection, attempt to close the failed blow out preventor and cap the well, and potentially connect the flowlines to a containment system. It will be kept on standby in strategic locations for emergencies, in shallow waters where the vessel cannot stay above the well.

This project highlights Saipem's commitment to technological innovation, industry-wide collaboration and the prevention of environmental impacts from oil & gas production.



Safety, environment and community development are key to success

Constant information of the citizens about oil and gas activities is important for their understanding and acceptance. The Tempa Rossa project. Interview with Roberto Pasolini, head of Commercial and Communication Division Total E&P Italia

What is Total E&P's Strategy?

The global environment in which our industry operates has undergone major changes in recent years, shaped by rising costs, the emergence of new players and environmental and social expectations. To adapt to these changes and maintain our margins, we must develop a profitable growth model that is sustainable over the long term. To achieve these objectives, we have implemented an ambitious, yet realistic action plan. Our success depends on our performance in the areas of safety, environment and community development.

What needs to be done to inform people about the activities of the extractive industry and overcome local oppositions in Italy?

Total considers dialogue a cornerstone of the relationship with the communities that host its activities. The constant information of the citizens about oil and gas activities it's important for their understanding and acceptance, of the nature of Oil&Gas activities. The dialogue with citizens can also allow improvements to the impacts of an oil and gas project. In fact, if we think of the role of information to citizens we can cite, as an example, the myths around earthquakes and the Oil & Gas activity: only a clear, simple and transparent information to the citizens can eliminate these myths and mitigate mistaken opposition to the Oil&Gas projects. In Total E&P Italy we created our magazine T>energy to inform citizens and stakeholders of the territories where we operate. At the same time, for example at Taranto, we have organized public debates with citizens and with environmental organizations. Oil companies could have more courage in communicating with people of territories in which they operate.

Could you explain the Tempa Rossa project?

Tempa Rossa oil field is located in Basilicata Region (South Apennines), at an altitude of 1,000 meters. The field will be exploited trough eight wells, six of which already drilled. The development project consists in building an oil and gas center to be linked with the production wells, an LPG storage and loading center and finally a tie-in to the existing Val d'Agri-Taranto pipeline, which will carry the oil to eni's Taranto refinery, from which the oil will be exported. The capacity of the pipeline as well as the refinery's tank farm and port terminal will be expanded to handle the increase of throughput. Tempa Rossa will produce 50,000 barrels of oil/day, 230,000 m3/day of natural gas, 240 tons/day of LPG. Italy's oil production will increase nearly 40%. The project represents an investment exceeding €1.6 billion.

Which are the next steps to complete Tempa Rossa project?

Development of Tempa Rossa field is very important for Total because the field has a significant potential and it will bring a strategic contribution to Italian economic development. At the moment, on Tempa Rossa site we are working to complete civil works necessary to prepare the construction of oil centre.

Concerning the work of site preparation we had to face a number of technical challenges, namely related to the geomorphology of the mountainous site and its climate, both in terms of engineering that in terms of peculiarity and huge amount of works needed to complete the project. In addition, we have to deal with unexpectedly long lead-times to get permissions by local authorities, which make difficult keeping e a significant progress of construction works. On the other hand we have to tackle the difficulties to get permissions in Taranto. Nonetheless, in March 2015, the appointment of François Rafin, a manager of great experience on the field, as new Managing Director of Total E&P Italy, express the determination of Total to put Tempa Rossa in production in the best conditions and timing.

Could you give us a summary of the sessions you will be covering at the OMC and of the events taking place at your stand?

Total is one of the companies historically Associated to OMC. This year, besides our booth incorporating a mini auditorium for short session presentations, we present the innovative 3D Virtual Reality Headset Oculus which will simulate a tour inside an oil well. We will also present food products of Basilicata and offer the possibility to taste them, thanks to the consortium Lucanica that we supported according to our sustainable development policy and initiatives in Italy. As for the technical sessions of the OMC we will participate illustrating 11 papers. These papers will present the most important technological challenges of the Oil&Gas sector in the world.

L.T.

A proactive approach to the changing demand patterns

The regasification capacity used in 2014 was over 50%, which exceeded the average usage rate of European terminals. Interview with Liz Westcott, managing director Adriatic LNG

The Adriatic LNG regasification terminal: an ambitious engineering project which came into reality 5 years ago. What does it means for the European and Italian gas markets?

The Adriatic LNG Terminal has been operating in the Northern Adriatic Sea since 2009. It is the first offshore gravity based structure for unloading, storing and regasifying liquefied natural gas (LNG) and - with a regasification capacity of 8 billion cubic meters of natural gas a year – meets more than 10% of Italy's gas needs. Our terminal is a unique infrastructure where technology and operational excellence are combined with environmental sustainability in order to provide innovative and reliable services that can respond to market challenges and help the Italian gas system to increase competitiveness and security. In recognition of this technological excellence and of its strategic role the terminal was awarded a prize as the "Best Infrastructure Project of the Year" at the 12th Platts Global Energy Awards. Moreover, in the LNG chain, Adriatic LNG has almost a "midstream" position: it is in the middle of that simple but essential process that allows Italy to use the natural gas that has been extracted miles away, mainly in Qatar but also in Egypt, Trinidad and Tobago, Equatorial Guinea and Norway. Our Terminal continues to allow Italy to balance the need of a direct link through pipeline with some remote gas production areas, thus enabling them to access a global markets and creating security of supply. I would like to add that Adriatic LNG is an excellent combination of three different businesses and cultures: the American ExxonMobil, the Qatari Qatar Petroleum, and the Italian Edison.

What are your operational results?

Since 2009 the terminal has received more than 370 LNG carriers and delivered more than 30 billion of cubic meters of gas into the national pipeline network (4.3 bln in 2014, with a reliability rate of 99.8%). The regasification capacity used in 2014 was over 50%, which exceeded the average usage rate of European terminals.

To what extent is Adriatic LNG affected by the economic recession?

The main impact of the economic recession has been to reduce the natural gas energy demand throughout Italy and Europe. Adriatic LNG has adopted a proactive approach to the changing demand patterns by launching a temporary storage service and flexibility service. These new commercial products improve our ability to meet our clients' needs. We have also participated in the Italian Minister of Economic Development's initiative for providing a peak shaving service during winter 2014-2015 which reinforces the strategic role of Adriatic LNG for Italy.

Today Adriatic LNG is presenting a digital poster in the session dedicated to Environment and safety. Why did you choose this topic?

"Put safety first" and "operate with integrity and high reliability while caring for the environment" are two fundamental objectives for our Company. We operate according to the most advanced international standards of environmental protection, energy efficiency and safety, in full compliance with the most stringent regulations and procedures. This is reinforced by the Company's safety vision of "Nobody Gets Hurt!" Overall Adriatic LNG has completed four Environmental Impact Assessments and has obtained the IPPC authorization (Integrated Pollution Prevention and Control). We also continue to conduct extensive monitoring programs for the coast marine environment that are agreed with ISPRA and carried out under ARPAV's supervision.

Adriatic LNG has been sponsoring OMC since 2009. What benefits do you see in this long-standing cooperation?

OMC is an outstanding event for sharing technical and scientific development and best industrial practices. In an era of constant challenges for the global energy system it is crucial we apply the latest technology and business thinking. In a country with a proud history of developing talent, we know events such as this one will stimulate the learning and passion of new generations of technicians and engineers and inspire them to join our industry. In recognition of our commitment to this event we are proud to be the long standing sponsor of the Best Papers Awards closing luncheon of the Conference.

S.P.

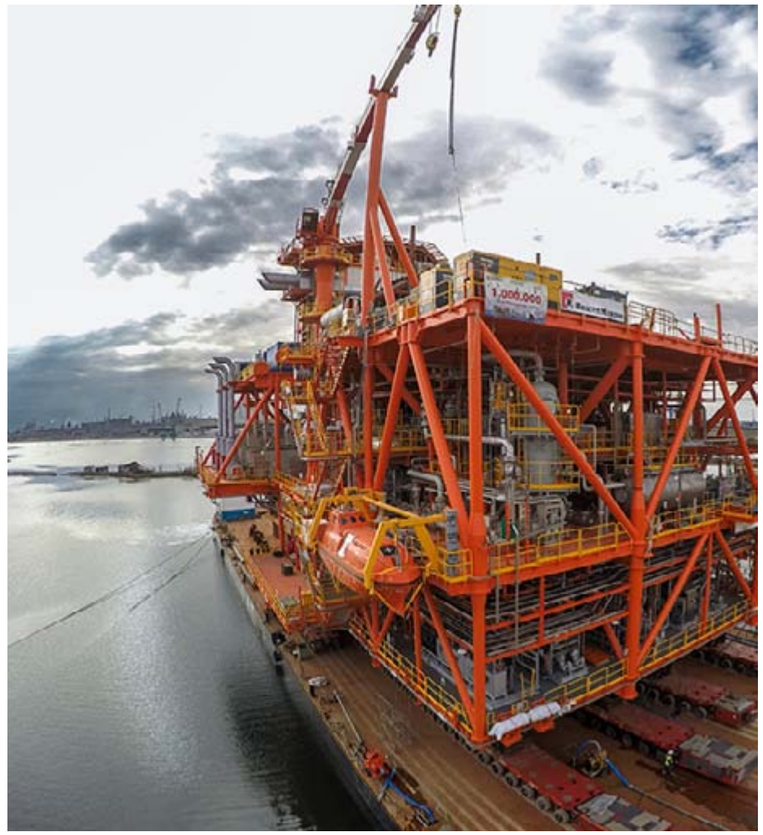
New strategies for a changing landscape

Interview with Rosetti Marino CEO Oscar Guerra: focus on flexibility, international presence and know-how. The ingredients for long lasting and successful partnership? "Frankness, transparency and reliability"

In the last 8 months oil prices have more than halved and the political landscape is deteriorating with events in Ukraine and Russia, as well as continuing uncertainty in the Middle East and North Africa. How do companies providing engineering and construction services to the oil & gas industry like Rosetti Marino are reacting to this situation?

The events of the last months are of course impacting the Oil&Gas sector. Most of the Oil Companies have dramatically reduced their budgets for Capital Expenditures and the consequences for Western European Service and EPC Contractors occur in a background already scared by hard competition coming from Far East players. The outcome of current situation reflects in the cuts of tens of thousands jobs worldwide and strong reduction of Operation Expenditures. As regards Rosetti Marino, in the last months several of our "target projects" have been cancelled or postponed by Oil Companies. In such a scenario, contractors like us can only appeal to their key-strenghts. Rosetti Marino's strong points are flexibility, international presence and capability to provide products and services not only for new assets but also for improvement and refurbishment of existing Oil&Gas production assets for Oil Companies. Our reacting strategy therefore is focused on increasing our presence abroad also referring to technical services and brownfield projects. We pay particular attention to those countries which develop Oil&Gas fields for in-

ternal need and not for trading. Moreover, we are targeting to strengthen our presence in subsea development assets.



Since 1993 Rosetti Marino transformed itself from a Construction Contractor into a Group specialized in Offshore EPC Contracts, able to provide a broad spectrum of products and services. What have been the effects of this transformation?

In the early 90's, ENI changed its supply strategy and decided to move towards EPC Contractor for Offshore Plants. We had to evolve if we wanted to remain in the market and the decision was to acquire small Engineering/ Design companies to compete our know-how and fit to market request. The path was long since then and not so easy, but the decision was good. We have improved our competencies with Engineering capabilities but we did not loose our traditional construction know-how that is fundamental for our success overseas, where "Local Content" is mandatory; however, our Engineering capabilities allowed us to approach other very important international Clients such as Total, Shell, ExxonMobil, Maersk and recently Chevron. Furthermore, the wide range of our experience and relatively small dimension – compared to big Engine-

continued on page 14

continued from page 13

ering Companies and main Contractors – makes Rosetti Marino the ideal partner for smaller and lean oriented Oil Companies.

How many people do you employ at the moment and in which locations?

At the moment the number of people employed in Italy by our Group is approx. 700, most of them in the Parent Company Rosetti Marino, the others in our two subsidiaries Basis Engineering in Milan (approx. 100 people) and Fores Engineering in Forlì (approx. 160 people). The number of employees expatriate abroad fluctuates and depends on active projects. In our biggest foreign subsidiary, the company KCOI based in Kazakhstan, are employed approx. 200 people.

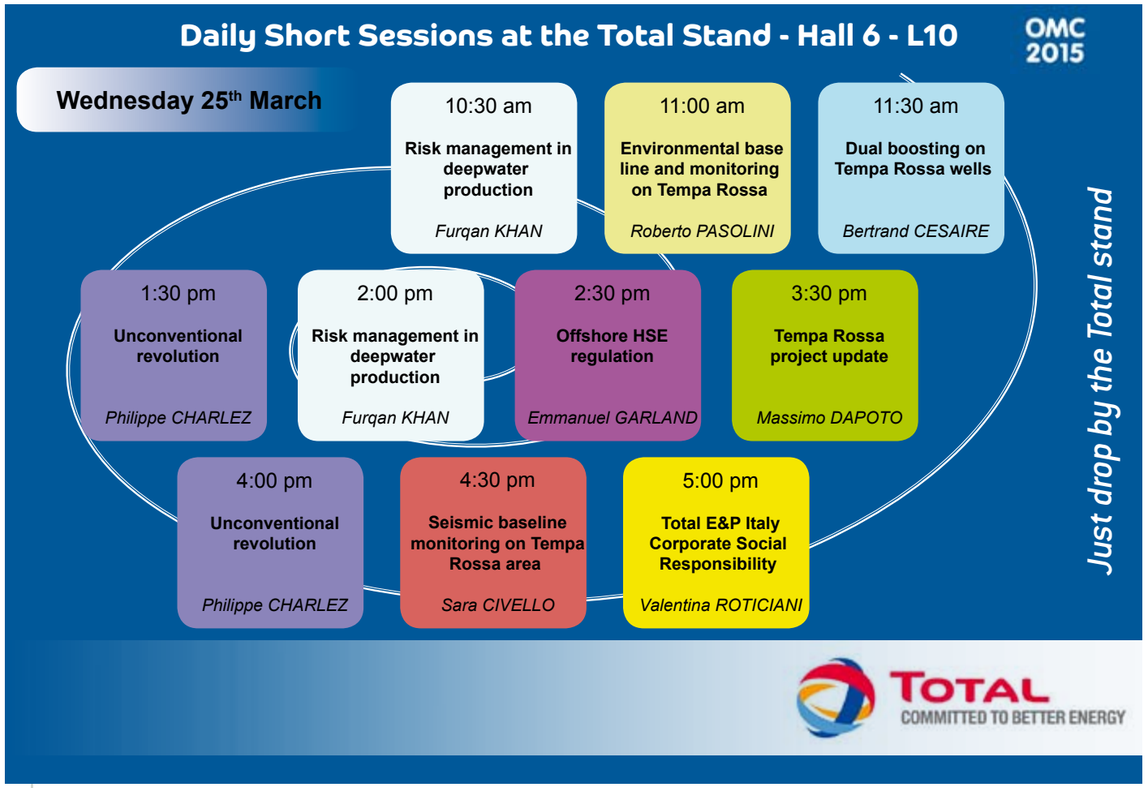
How important are to Rosetti Marino joint ventures with international partners, collaboration with National Oil Companies and main contractors. What are the main difficulties in working with international partners?

In the late 90's Rosetti Marino started a process of internationalization that hastened in the recent years. Companies of Rosetti Marino Group are present in North Africa (Algeria, Libya, Egypt), North Sea Area (United Kingdom), West Africa (Nigeria and Congo), Caspian Sea Area (Kazakhstan) but also UAE, Brazil and Singapore. In most of these countries we were able to settle, thanks to agreements with local partners that gained collateral benefits in co-shared joint Companies. These joint Companies can count on Rosetti Marino's technological capabilities and satisfy the demanding request of "Local Content" imposed by Production Countries. Of course, working in such different countries and with strong presence of local partners and clients is not always easy, but also this decision was properly made. Our traditional market – and Italy in particular – offers very small or no opportunity at all for new projects. Moreover, we improved very much our flexibility and opened our minds to different cultures. The relationship with our local partners is in general very good and we both appreciate each other's added value and win-win approach. In our experience, frankness, transparency and reliability are mandatory ingredients for long lasting and successful partnership.

Could you give us a summary of the session you will be covering at the OMC conference and of the events taking place at your stand?

We do not have any particular event at our stand, we have rather organized (through our Shipbuilding Unit) the workshop "Subsea Construction Vessels - Market, Design and Operation" that will deeply explore the Subsea Vessels market which has experienced significant growth. The workshop will address and discuss how Subsea Construction Vessel designers and equipment manufacturers are responding to the key operators' increasingly complex and evolving demands. As far as I am concerned, I will be co-chairman in the Session "Strategies for Offshore Developments".

Luca Tabasso



• Today •

Invited lecturers

•16.30 • Arena

Fundamentals of Multiphase Flow in Enhanced Oil Recovery

Enhanced oil recovery involves the displacement of one fluid by another in a porous medium. These fluid-fluid displacements can give rise to a rich variety of hydrodynamic instabilities and, beyond their scientific value as fascinating models of pattern formation, they are essential to understanding engineered subsurface processes like enhanced oil recovery and geologic carbon sequestration.

Here, I will review recent experimental and computational studies on unstable porous-media flows; I will discuss their origin and the mathematical models that have been used to describe them. I will point out many challenges that remain to be resolved in the context of multiphase flows, and suggest modeling approaches that may offer new quantitative understanding.

In particular, I will present experimental, theoretical and computational results for: (1) fluid mixing from viscous fingering; (2) the impact of wettability on viscously unstable multiphase flow in porous media; and (3) fracturing in granular media.

Ruben Juanes, MIT

Pore-scale imaging and modelling: a revolution in our understanding of multiphase flow

The ability to image in three dimensions, from the nanometre to the centimetre scales, reservoir rocks, and the fluids within them, has transformed our understanding of flow and transport processes in porous media. In addition, the use of various methods in computational fluid dynamics now allows us to model flow processes at the pore scale and to predict averaged properties, such as absolute and relative permeabilities.

I will give an overview of the technology, highlighting some of the latest developments in this area, including the imaging of fluid displacement at reservoir conditions with micron resolution, prediction of multiphase flow properties in complex carbonates, and pore-by-pore measurements of contact angle.

I will conclude by discussing how these results can be used for better reservoir management of performance prediction.

Martin Blunt, Imperial College London

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Low oil prices: what to do now?

The opinion of Joe Perino, KBC Global Lead Partner, Upstream

The recent and rapid collapse of oil prices to less than $50 per barrel has created a challenging environment for all energy sector companies. Many have deferred or cancelled projects, curtailed exploration and drilling activity. Virtually all have initiated some type of cost reduction program. This in turn has led to significant downsizing in oilfield services and suppliers. As all the sector companies look to control costs in this cash-constrained environment, KBC sees opportunity in the face of these challenges.

Industry cycles have shown that one should use this price drop as an opportunity to drive through fundamental improvements in operations. Deep cuts in maintenance, production, and operating budgets can actually damage asset integrity, reduce reliability, and negatively impact production—the very engines of cash generation. An unfocused cost-cutting response can also lead to the loss of the most capable and critical staff. In short, now is the best time for Operational Excellence.

Consider the facts. With more than 70% of current oil production coming from fields older than 10 years, and 90% using some form of artificial lift or EOR, it's an exceptional production system that cannot benefit from an increase in operational efficiency, reliability or productivity. In fact, experience shows that production system availability has the single largest impact on Overall Asset Effectiveness (OAE) next to well downtime. The best approach is a holistic one that addresses process, energy and reliability together which unlock the producing asset's Maximum Achievable Potential (MAP).

Addressing these three imperatives will help maximize revenue and reduce the unit cost of every barrel. They also help make focused cost reductions, justify new spend, and support superior returns until the price recovery eventually comes. And speaking of oil prices, don't count on any major increases anytime soon. US production is still increasing and the Saudis are unlikely to change their policy at the next OPEC meeting in June.

Fracking, the EU Commission takes stock of the situation

Five European countries have already granted authorisations, other seven are evaluating the projects

While 16 EU countries actually exclude the use of hydraulic fracturing, 12 have already granted the permissions or are evaluating projects that encompass this technology. These are the responses to a questionnaire that the European Commission sent to the 28 member states in order to check if they respect the provisions of the "recommendation on minimum principles for the exploration and production of hydrocarbons (such as shale gas) using high volume hydraulic fracturing," approved in January 2014 by the EU executive branch.

To the main question of the questionnaire: "Did you grant or do you plan to grant authorisations for the exploration or production of hydrocarbons that may require the use of high-volume hydraulic fracturing?" – 5 countries answered: "Yes", whereas other 7: "Possibly".

In particular, Denmark has already granted 2 onshore licenses with the shale gas target and it is analysing possible offshore projects, Holland has granted 3 onshore permissions (which yet have been pending due to an inquiry looking at potential effects of fracking to be completed at the end of the year), in the United Kingdom applications for planning permission and environmental permits for exploratory activities associated with high volume hydraulic fracturing for shale gas at two sites in Lancashire are currently being determined by the local Mineral Planning Authority and the Environment Agency, Poland is examining 48 licenses for the exploration of hydrocarbons in shale formations onshore and 8 offshore and Romania issued 2 water management permits for onshore exploration of hydrocarbons that may require the use of high-volume hydraulic fracturing.

Moreover, next spring the Government of Lithuania is planning to re-open its hydrocarbon licensing tender for one onshore block that would include requirements for exploration of shale oil and (or) gas in the licensing tender conditions, whereas the Republic of Ireland and Northern Ireland are cooperating in an extensive research programme which will involve the collection of baseline environmental data in areas likely to be the subject of exploration of gas from unconventional sources. The programme is expected to report in 2016.

Portugal, the legislation of which currently does not distinguish between the conventional and unconventional resources, is analysing the potential of shale gas in two geological areas of the country arousing the interest of oil companies.

Hungary in turn has granted a few permissions for experimentation with some volumes of hydraulic fracturing, Spain has assigned 7 onshore licenses which in some cases could entail fracking (but only upon special consent) and Austria is analysing possible granting of permissions for experimental activities (although no requests have been submitted yet).

Last but not least, the German government is working on a provision, scheduled to be approved by this summer, which will regulate the use of hydraulic fracturing technologies in exploration and production of oil, gas and geothermal energy.

L.T.

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Iea: markets are still "precarious"

Focus on oil stocks. US supply response to lower prices "might take longer than expected" but it "might be more abrupt"

The partial rebound in oil prices that occurred in late January and early February have marked a sharp pause, and as Iea remarks now markets are extremely "precarious". Behind the "façade of stability", the agency underlined in its last Oil Market Report that "the rebalancing triggered by the price collapse has yet to run its course", and "it might be overly optimistic to expect it to proceed smoothly".

Till a couple of weeks ago, steep drops in the US rig count have been a key driver of the partial price rebound. Yet US supply so far shows precious little sign of slowing down. Quite to the contrary, "it continues to defy expectations". Output estimates for 4Q14 North American supply have been revised upwards by a steep 300 kb/d. The projection of 1Q15 supply has also been raised by Iea. Plunging US crude throughputs – due to seasonal and unplanned refinery outages, as well as weak margins and high gasoline stock builds in December – have seen US crude inventories soar, compounding the impact of robust supply growth. Total US crude stocks stood at all-time record.

The unwinding of seasonal refinery maintenance "may slow US crude stock builds in 2Q15 but will not stop them", and "stocks may soon test storage capacity limits". That would "inevitably lead to renewed price weakness, which in turn could trigger the supply cuts that have so far remained elusive".

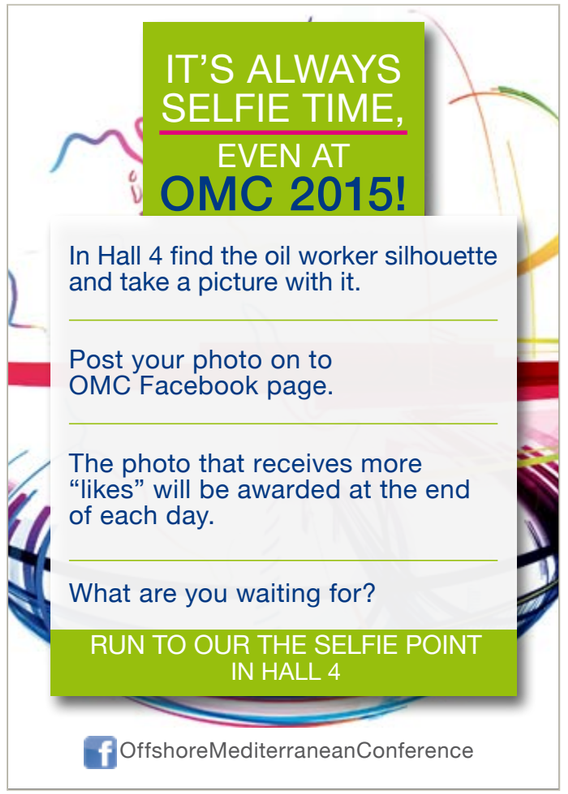
While the US supply response to lower prices "might take longer to kick in than expected", it "might also prove more abrupt". At the same time, "supply disruption risks are on the rise". Producer countries that depend on high oil prices and that do not enjoy large buffers will also "find it hard to balance their budget and fund social spending programs at current prices". The surging dollar will also make it harder for some "to pay back dollar debt and overcome financial hurdles".

Product demand, meanwhile, has shown signs of life, with even European consumption "emerging from a secular decline to show strong growth of 3.2% in December and 0.9% in January". That demand strength "has widened the deficit of OECD product inventories to their seasonal average, a trend largely obscured by surging US crude stocks".

"Whether such strength in product demand and refining activity can be sustained is unclear", both have benefited from one-off factors, such as frigid weather in North America and "opportunistic buying and growing interest in storage plays". While that would have helped tighten product markets, "such demand is less sustainable than that driven by underlying economic growth", and there are still "few firm signs at this stage that lower prices are giving the economy a real boost".

Facing exceptional uncertainty, conclude the Iea, "many market participants remain on the fence. But market forces are not sitting still".

FEDERICO GASPARINI



Wednesday 25 March

09.30 Inauguration and Opening Ceremony

10.30 Opening Plenary Session

- Focus on Change: Planning the next 20 years. Diversifying choices, increasing opportunities

13.00 Working Lunch - Sponsored by Proger - Adriatic LNG

14.30 - 16.10 Digital poster presentations (HALL 3)

- Safety, Environment and Sustainability
- Facilities and their life cycle assessment
- Flow Assurance

14.30 - 16.10 Technical Sessions

Seismics and Exploration (ROOM A)

- Unveiling complex geology with broadband imaging
- 2d seismic lines reprocessing test using common reflection surface technique
- De-risking appraisal phase by a proper imaging workflow: a case history from onshore north Africa
- Unlocking subtle hydrocarbon plays through 3d seismic and well control: a case study from West Gebel El Zeit district, Southwest Gulf of Suez, Egypt

Offshore and Deepwater Technologies 1 (ROOM B)

- Arctic risk picture – management of safety and environmental risk
- Subsea gas compression for a greenfield long distance tie-back to an onshore lng facility
- Angola west hub: a phased development of several reservoirs through long tiebacks and increased oil recovery technologies
- Thermodynamic issues in downhole sour gas purification by water scrubbing

Reservoir Characterisation 1 (ROOM C)

- Reliable trapped gas saturation measurements from forced imbibition experiments
- Dynamics of low resistivity pay acacus formation; north africa formation testing experience and challenges
- ENI tls deconvolution for the reservoir management
- Quantitative evaluation of invasion from time lapse lwd measurements to optimize the formation testing and sampling program

Well Construction and Management 1 (ROOM D)

- Enhanced post-well analyses by data integration over entire projects' lifecycle
- Innovative well integrity approach for proactive management of production/injection wells, considering well barriers degradation and residual well life estimation
- A method to improve adhesion strength at the cement/steel casing interface and its effect on cement evaluation log response
- Novel fiber-based lost circulation treatment cured total losses in depleted zones in emeraude field

Flow Assurance (SALA VERDE)

- Field tests results of production inside hydrate p&t zone using new hydrate monitoring instruments
- Tools and methodologies to increase productivity in flow assurance studies – eni experience
- Subsea pipeline electric heat tracing (eht) – active heating application for a deep water brown field development
- Field deployment of ENI vibroacoustic pipeline monitoring system (e-vpms): long term performance analysis

16.30 - 18.10 Technical Sessions

Offshore and Deepwater Technologies 2 (ROOM B)

- Ground model: a high value support to deepwater giant developments
- Suction pile founded one piece installed platform
- Development and requirement for submarine surveys of longer routes and deeper areas
- Floating production units – turrets the effectiveness of a constructability approach

Production optimisation 1 (ROOM C)

- Slug catcher multiphase cfd modelling: optimisation and comparison with industrial standards
- First ever sub-sea hydraulic jet pump system used to optimize single well development offshore Tunisia
- Integrated optimization of surface assets with fluid-dynamic check workflow: a real case application
- Innovative and simpler technology to recover flare gas

Well Construction and Management 2 (ROOM D)

- The application of the extreme-lean profile as an example of operational excellence which allowed to achieve an outstanding production performance by reaching the reservoir target with a bigger hole size
- High performance water base fluid improves rate of penetration and lowers torque. Successful application and results achieved by drilling a horizontal section through the reservoir
- Advances in the hydrocarbon gas-liquid equilibrium understanding in water and oilbased drilling fluids
- Settling and slip velocity evaluation in synthetic drilling fluid

Environmental Protection in Offshore Operations (S. VERDE)

- Heads. Marine surveillance system for oil spills
- A probabilistic modelling framework for estimating the effects of mitigating measures on the socio-economic consequences of offshore oil spills
- Platform for oil spill response gap analysis – case barents and norwegian seas
- The application of the integrated environmental authorization ("aia") in a feasibility stage of the offshore activity: a case study

16.30 - 18.10 Digital poster presentations (HALL 3)

- Seismics and Exploration
- Unconventional Resources
- Technical and Non Technical Risk Assessment
- Energy Efficiency

16.30 Invited lecturers (ARENA)

Fundamentals of Multiphase Flow in EOR - Ruben Juanes, MIT, USA

Pore - scale imaging and modelling: a revolution in our understanding of multiphase flow - Martin Blunt, Imperial College London, UK

16.30 - 18.00 Workshop Assomineraria (ROOM A)

21.00 Gala dinner at OMC venue - ENI is partner of the event

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