IRF 2011 Offshore Summit – where do we go from here?

Summary of Conclusions

Introduction

The first International Regulators' Forum (IRF) offshore safety summit in Stavanger, Norway in October 2011 provided an opportunity for offshore regulators and key industry players to come together for an open and frank dialogue about offshore safety matters in the wake of the Macondo/Deepwater Horizon blowout in the Gulf of Mexico in 2010 and the Montara blowout in the Timor Sea in 2009. More than 200 delegates attended the conference, with high level representation from the industry, regulators, the workforce and academia.

In addition to presentations from the key players in the various safety, environmental and political work streams following on from Macondo/Montara, the Summit provided an opportunity to identify what more needed to be done to take forward and coordinate this crucial agenda. This paper summarises the conclusions from a number of round table sessions at the Summit, which specifically looked to see where more work was needed and to seek agreement on broad priorities.

Role of Governments and their offshore regulators

There was a clear recognition that Governments need to find and provide well resourced and competent offshore regulators, and a preference for offshore legislative regimes which were performance based rather than prescriptive. These views echoed findings from the Australian IOPRO Summit earlier in 2011.

Concern was expressed about the need for better coordination of the activities of national offshore regulators, and wherever possible harmonisation of regimes/standards, bearing in mind the international nature of the oil & gas industry which works across national boundaries. The focus of regulators should be on reducing duplication of effort, such as by:

- More effective sharing of findings and incident data
- Looking for opportunities to harmonize regulatory practices
- Support for consolidating safety and environmental protection responsibilities into a single authority
- Greater involvement by regulators with the international standards community
- Support / strengthening of the existing IRF projects on Safety Culture & Leadership, BOP integrity, Performance indicators, Defined criteria for Operator competencies / capacity
- Possibly a stronger (and more formal) role for IRF

Role of operating companies

Discussion on how operating companies could enhance global continuous improvement of offshore safety matters post-Macondo came up with a number of priorities for individual operators to adopt:

- Management and Leadership
    - Improve leadership understanding of major hazards, and developing appropriate curriculums to better educate senior management
    - Improve quality of management offshore visits, with more focus on process safety risk management issues rather than just occupational safety risks.
    - Effective and genuine engagement with the workforce on safety issues
    - Creating a culture of openness to enable anyone to take time out for safety concerns
    - Commitment to adherence to common procedures regardless of location of rig/platform

- Organisational issues
    - Improving competence and training by (a) standardising training and competency requirements, especially for those in roles related to drilling, (b) developing scenario–based training for managing dynamic situations, particularly for drilling operations and (c) ensuring appropriate levels of competency assurance for contractors
    - Better sharing of lessons learned and best practices - this challenge created lots of interest throughout the conference.
    - Improve the quality of contracts to ensure accountabilities and responsibilities are clear, with appropriate use of bridging documents

- Risk management and barriers
    - Establish a suite of process safety KPIs in addition to existing personal safety KPIs
    - Recognise the crucial nature of a robust management of change process, and ensure it is rigidly adhered to
    - Incorporate the concept of “barriers” into risk management arrangements, with barrier performance standards and verification, awareness of barrier reliability and an effective risk assessment process when barriers are degraded. The use of the bow-tie approach was considered a good aid to effective barrier appreciation and management.

- Standards and guidelines
    - International operators should establish global standards within the company for their MOC, competency, mechanical integrity and hazards recognition processes.

    - Work with others to strengthen and promote international cooperation and best practice standards

- Well capping and emergency response

    - Operators to commit to supporting the development and use of regional/global well cap “toolkits”
    - Ensure that agreements are in place for vessel sharing, and have plans for logistics management in the case of emergencies

Role of drilling and well contractors

Some of the round table discussions looked more specifically at the role of drilling and well contractors. Issues very similar to the discussions on operating companies were raised, with similarly high importance being given to competence (in well control, and for specialist contractors especially), Management of Change, increased use of process safety KPIs, the importance of a barrier management philosophy, and the challenge of how to better share lessons across rigs and between companies.

The implementation a consistent approach within drilling companies, irrespective of geographic location, came out particularly strongly in discussion, as was the need to promote the culture, starting with management, where it is encouraged/rewarded to speak out on safety related issues.

There was discussion about how contractual arrangements can affect safety.

Particular challenges for the drilling industry focussed on the affects of an ageing workforce, and the factor of a large number of new rigs about to enter the market. Securing the competence for this developing reality has to be a priority for the industry.

Role of industry bodies

There was very strong agreement of the need for industry bodies to work together to streamline safety and environmental issues and to reduce duplication. Key areas where further consolidation could be done to provide better standardisation were:

- encouraging wider use of the IADC Safety Case guidelines
- develop more globally acceptable bridging document guidelines
- work to better align API and ISO standards – there was criticism that the existing standards development processes took too long, and industry associations were asked to work hard to resolve this issue
- best practice is often developed in-house before being adopted outside of a given operator - industry associations can help this happen quickly.
- industry associations should also identify best practice and any technology information that is of benefit to the industry, and then lead on developing it (e.g. via an OSPRAG model).

Discussion highlighted the trade associations had a clear role in helping and encouraging the publication of incident data, safety case documents, spill response plans etc., in order to raise public and workforce confidence in their ability to manage risk and hence earn a "social licence to operate". Similarly, the view from the Summit was that trade associations should take a strong interest in identifying members who are weak and have poor safety/ environmental performance, in order to either help them or make sure they are removed from the industry. There was a strong plea that trade associations should take a stronger and more high profile in this – one poor operator can severely impact on the whole industry, so it was in industry's own interests to identify their poor performers and provide help etc to tackle their poor performance.

There was strong support for trade associations influencing their industry's very top leadership. Industry associations can lead on identifying the sort of KPIs that top management need to effectively monitor and review operations. Industry associations can then help to develop common KPI metrics and work to pull together annual information on the overall industry performance (this links to the point regarding poor performers above)

Discussion revealed significant concerns about the future capability for the industry, and the strategic role that trade associations should be playing. The challenges ranged from;

- the wave of new drilling rigs which were due to enter the market shortly, and thus the need to attract and train sufficient new personnel
- The overall age profile of the industry created a wider human resource challenge. Can industry associations do more to encourage recruitment into offshore oil and gas, perhaps by helping students understand the need and by better promoting the industry? They could also explore the use of apprenticeships and promoting approaches that build up knowledge and experience by onsite learning
- New entrant companies coming into the industry would benefit from industry agreed pre-qualification requirements and minimum standards to operate.

Another common discussion thread throughout the summit was that better training and competence standards are required, both for new entrants and also to improve the skills of existing staff. Industry associations with experience of developing such standards can take the lead (e.g. IADC) to develop standards, broaden these out and then promote. As competence is such a critical issues, an accreditation process could also be explored.

IRF Priorities

The second day of the Summit provided an opportunity for IRF members to present details of the work they have been doing to take forward work in four key areas post-Macondo/Montara:

- BOP/well control
- Developing /adopting globally accepted standards
- Safety culture and leadership
- Company "fitness to operate"

The various presentations (and in the case of Standards, a paper) are posted at http://www.irfoffshoresafety.com/conferences/2011Summit/.

A further session of round table discussions concentrated on these four priorities, with the purpose of informing IRF for future development. The Annex to this paper summarises key issues raised during he discussions, which lead IRF members will take into consideration as they further develop their proposals.

Steve Walker
Chair, IRF Summit Programme Committee
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ANNEX

Summary of round table discussions on IRF Priority areas.

Priority area 1 - BOP/Well Control

What should be done and by whom to (a) raise the levels of competency regarding well control and (b) raise the levels of cooperation, communication and participation between the parties involved to improve the risk management and decision taking? (Cover roles of industry, industry associations and regulators/IRF).

Summary of discussions

1. Most well control training doesn't cover cementing operations, barrier management and analysis, well bore monitoring through the point when the final tested barrier is in place, recognition of signals and response, special considerations such as OBM and horizontal wells. Suggested lead: IADC in cooperation with operators, contractors, trainers, and regulators.

2. Real time monitoring of BOP systems status and data is needed. Suggested lead: manufacturers, drilling contractors, and operators in consultation with regulators.

3. BOP capability and availability: Standardized manufacturer testing of BOP elements (e.g. shear ram cutting power) is needed. Optimal ongoing testing procedures should also be assessed. Suggested lead: manufacturers, drilling contractors, and operators in consultation with regulators.

4. Research and assess BOPE actuation procedures to determine the importance of sequencing. Assess options for making BOPE more robust to minimize the importance of specific sequencing. Suggested lead: Manufacturer, drilling, and operator in consultation with regulator.

5. New technology needs to be developed and assessed including automated BOP response/actuation and Shell's recently announced projects (sealing casing, emergency severance of drill pipe/riser with explosives). Suggested lead: operators and drilling contractors.

6. A consistent regulatory approach on secondary BOP actuation capabilities is recommended. Suggested lead: regulators.

7. Other key contributions included:
    - Suggest all regulators draw a regional boundary and work with other regulators to share and learn, even exchange personnel to bring back learning
    - Host a worldwide database of offshore incidents
    - Remove barriers to sharing of incident data
    - Does the regulator have the technical competence to challenge/understand creative and sophisticated approaches?

- Training – There is a clear need for improvement. Well control people must be competent and the risk awareness should be raised. Standardisation is a good path. Maybe ISO could develop a standard on minimum well control curriculum. Qualification of subsea engineers is also important. Well construction
- Well control holistic approach (IADC/OGP/manufacturers – functionalities). Early detection is key – pressure allow monitoring and the definition of some automatic functions to automatically act and stop accidental path – develop fail safe mechanisms
- Remote monitoring of critical wells – 24/7 support
- Safety instrumented systems (standard) have been largely adopted in refining/chemical industry. Should OGP/API/IADC explore what Schlumberger Information System could be considered to mitigate risk in BOP/well control?
- Continuously elevate quality and depth of hazard identification, risk awareness at the rig site (and production site) (e.g. Removing BOPs while waiting on cement)
- Top to bottom clarity on roles, responsibilities and decision-making in design and execution of every well. Discussion favoured the APPEA's Bridging Check List of best practice, and wondered whether OGP/API/IADC should consider it as a global practice.

Priority area 2 - Use of Standards

What more can be done to improve the process of developing/adopting globally acceptable safety and environmental standards in the offshore oil & gas industry? What more can be done to ensure their wide use?

Summary of discussions

1. The role of IRF / NSOAF / Regulators in developing/adopting globally acceptable standards should include:

- IRF members to push for adoption of standards in the different regimes.
- Sharing of standardization work across IRF members, investigating what it takes to use certain global standards within different regimes
- IRF members should participate with industry in developing standard
- There is a need for high level standards that are enforced everywhere.
- Development and implementation of standards goes beyond the ability of some IRF members as they could impact the mandates of non-IRF member regulators (e.g. Coast Guard, Transport, etc.).
- IRF members need to engage non-IRF regulatory agencies on this issue
- Commence a pilot project, say in the North Sea, through NSOAF as a test case for global use of standards. A key factor will be to build the business case for the adoption of international standards. Conduct a group analysis to determine if there is a need for a North Sea Annex for any standards.
- IRF develops a strategy for areas to focus on for global standardization:
    - Which are most important for safety and environmental protection (e.g. global standards for training)
    - Which are most mature and ripe for easy implementation across different regimes?

2 The roles of others was summarised as:

- Industry, IRF members and professional associations need to be engaged and push together towards standard development and operationalisation. There is a need for a “singleness of purpose” on this.
- Companies should move away from internal standards and incorporate international standards, possibly creating annexes
- Uncertainty about the role for certifying authorities in development of standards? What role do they need to play and how could they tailor their services to meet standard development.

3. The round tables had clear recommendations on how IRF and other offshore regulators can ensure the wide use of standards

- The IRF should accept the opportunity to participate in the management of the ISO TC67 process. IRF members should then decide which of the standards are most applicable to their jurisdictions and collectively incorporate them into guidance documents
- We recommend that IRF members and industry focus on a standard that has a change to get early consensus on, e.g. Guideline on BOP
- There needs to be a consistent application of standards around the world. Inspectors for IRF members should be trained to ensure that they inspect to

standards consistently among the various jurisdictions. An example would be how IRF members address the role of consistency of how various certifying authorities (e.g. DnV) apply standards

- Regulators should hold management accountable for widespread use of standards. This can help create “cautious unease”.
- Communication of changes to standards could be improved. Regulators should play a role in communicating changes to organizations that fall under their mandates
- Suggested Seven step procedure:
    - 1. IRF sponsor a team to review and equivalence mapping of standards.
    - 2. Rationalize differences.
    - 3. Gap analysis - to add standards that are still missing.
    - 4. Prioritize - what to address first.
    - 5. Get representatives from international standards organizations to discuss and resolve differences.
    - 6. Get major regulatory bodies. (Western Europe and North America) to agree on standards and other nations will follow.
    - 7. IRF to report back using OGP report (Alf's pie chart) on progress on commonly used standards.

Discussion also covered what companies can do to encourage the widespread use of standards:

- Operators and regulators need to agree and adopt these standards. Operators need to ensure these standards are used everywhere. This is particularly relevant for the largest international oil companies
- Simplify the suits of standards so that the workforce has improved visibility/understanding of them.
- Formalize the induction/train in the use of standards in the company (We have them but don’t use them)
- Ensure that decision-makers are aware of the consequences of their final approval of work programs. They should understand that any failure to adhere to standards can have direct negative impact on them
- Does academia use/train in the use of standards as part of the curriculum for engineers/scientists?
- Root-standards in actual circumstances – define why the use of a particular standard is

Priority area 3 - Safety Culture & leadership.

What sort of role should regulators play in ensuring good safety culture in the offshore oil & gas companies? Which are the five most important indicators suitable for assessing whether a good safety culture is in place?"

Summary of discussions

(a) Role of regulators**.**

The general thrust of the roundtable discussions on this question were that Regulators should have a strong role in helping the offshore industry develop a good safety culture. This influence should be in the areas of promotion, coaching, giving oversight and, possibly, developing guidance and clear expectations. However, a key difficulty was the need for a common understanding of what issues are covered by the term "safety culture".

It was recognised that assessing safety culture is different from other work undertaken by Regulators, and at least one group identified the Regulators needed to have access to social science expertise to assist them in this task.

(b) Indicators of the existence of a safety culture.

Some of the tables struggled in identifying safety culture indicators, but general discussions identified that safety culture issues ought to be covered within audits carried out by either the operator or the Regulator, either as a distinct "safety culture audit "(using suitable tools which are now available), or by assessing some aspects of a safety culture during more mainstream audit activities. Areas which were identified as key areas of a successful safety culture were:

- The level of focus on process safety leading indicators such as safety critical backlog (and their trends over time),
- The behaviour of senior managers in balancing safety –v –production, and their leadership abilities. One suggestion was that there should be clear links in Executive performance-based remuneration packages to company process safety performance (rather than just personal safety such as LTIs)
- The extent and effectiveness of any "Stop Work" schemes
- The ability of the company to learn from previous failures and to incorporate lessons in the future. This would therefore include the level and depth of incident and near-miss reporting in the company
- How transparent was the organisation in encouraging open discussions of problems and issues? The quality of how any health &safety committees function will be a good guide on this.

Priority area 4 - Fitness to Operate

What are the five most important criteria for judging whether a party is "fit to operate" an offshore petroleum facility? What benefits/challenges do you see in using a Capability Assessment Tool as a threshold requirement to determine this?

Criteria identified included:

- Financial capacity
- Training and competency
- Management Systems (inc Quality Management)
- Past Performance (HSE & legislative compliance)
- Risk Management
- Intrinsic Expertise (i.e. staff vs contractors)
- Contractor Management
- Workforce engagement
- Organisational Learning
- Safety Leadership

There was only relatively small amount of discussion on the question relating to the use of a Capability Assessment Tool to identify threshold requirements, but identifies benefits and challenges were:

Benefits:

- Transparency
- Raise standards / provide benchmark

Challenges:

- Flexibility to address varying regimes
- Acceptance by industry
- Application to contractors
- Restriction of regulators flexibility