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LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

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Prepared	Checked
Paul Harrison	Amy Annand
Signature	Signature

Authorised
Nick Jackson

Reporting organisation name & address	Reporting organisation reference(s)
Lloyd's Register EMEA Consulting Services Department Denburn House 25 Union Terrace Aberdeen, AB10 1NN	

Sponsoring organisation name & address	Sponsoring organisation reference(s)
Transocean 4 Greenway Plaza Houston TX 77046 USA	

Summary

This report provides a summary of the findings of the LR EMEA Safety Management and Safety Culture/Climate Reviews of Transocean's North America operations. The report is based on reviews of four rigs and the Divisional offices in Houston.

Key words	Distribution
	Transocean, Managing Director NAM Transocean, General Manager NAM Transocean, QHSE Manager NAM Adrian Rose, Vice President QHSE Jimmy Moore QHSE Houston Angela Garcia QHSE Houston

Report glossary

AD	Assistant Driller
BOP	Blow Out Preventer
BP	British Petroleum
CAKES	Comply, Authority, Knowledge, Experience, Skills
CMS	Company Management System
CP	Competent Person
CYA	Cover Your A**
DAFWC	Days Away from Work Case
FAC	First Aid Case
FOCUS	Formulate, Organise, Communicate, Undertake, Summarise
FR	Fire Retardant
GSF	GlobalSantaFe
H&S	Health and Safety
HSE	Health, Safety and Environmental
ICS	Inventory Control System
IT	Information Technology
JRA	Job Risk Assessment
JSA	Job Safety Assessment
LTI	Lost Time Incident
MoC	Management of Change
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OJT	On the Job Training
PA	Performing Authority
PMAA	Performance Monitoring, Audit & Assessment
POB	Persons on Board
PPE	Personal Protective Equipment
PTW	Permit to Work
RMP	Rig Manager Performance
RMS	Rig Maintenance System
RSTC	Rig Safety Training Coordinator
RSTT	Rig Safety Training Technician/Trainee
SLF	Safety Leadership Foundation
SLT	Safety Leadership Training
SMS	Safety Management System
START	See, Think, Act, Reinforce, Track
THINK Plans	The Company Planning Process
TOFS	Time Out for Safety
TOPS School	Pre-rig Orientation Training
TRA	Task Risk Assessment
TRIR	Total Recordable Incident Rate
TSTP	Task Specific THINK Procedure

Appendix glossary

COM	2-Way Communication (internal and external)
EMP	Employee Influence
LEA	Leadership
PRM	Planning and Risk Assessment
RIG	Rig Specific Questions
RRR	Resources, Roles and Responsibilities
SPP	Strategies, Policies and Procedures
TRA	H&S Training and Competence
TRU	Trust (blame – just culture)

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Executive summary

Introduction

LR EMEA was engaged to support Transocean as a result of a series of serious accidents and near hits within the global organisation. Over an 18 day period during March 2010, teams from Lloyd's Register EMEA visited Transocean Divisional offices in Houston, and the drilling rigs Transocean Marianas, Transocean Deepwater Horizon (DWH), Discoverer Clear Leader (DCL) and GSF Development Driller II (DDII) in the Gulf of Mexico (GoM), to conduct a review of the company Safety Management System, safety culture and safety climate.

Without doubt, previous incidents and near hits experienced throughout the organisation were as a result of multiple causes and many contributory factors. This report summarises the findings from the North America Division review, identifying safety related strengths and weaknesses and the inherent drivers behind the weaknesses, in particular.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the Safety Management System (maturity), safety culture and safety climate in the North American (NAM) Division, both onshore and offshore.

Summary of results

The results of the maturity assessment and perception survey are summarised in the sections below:

1. Classification of industry recognised Safety Management System elements against maturity index criteria.

2. Key strengths and weaknesses identified.

3. Key findings from the perception survey.

1. Classification of Management System elements against maturity index criteria

The assessor ratings are a reflection of the LR EMEA reviewers' measurement of the organisation against the scoring matrix; these were then averaged to give the initial assessor rating. The five point maturity scale has the following categories:

1. Emerging (lowest category).

2. Managing.

3. Involving.

4. Cooperating.

5. Continuously improving (highest category).

A complete description of the review approach, including details of the maturity criteria, is contained in a separate Methodology Report. The data is presented overleaf in the form of a spider chart (see Figure 1). The spider chart represents findings from all four rigs as well as information obtained from the Divisional office.

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Figure 1. Spider chart of maturity categories – North America Division
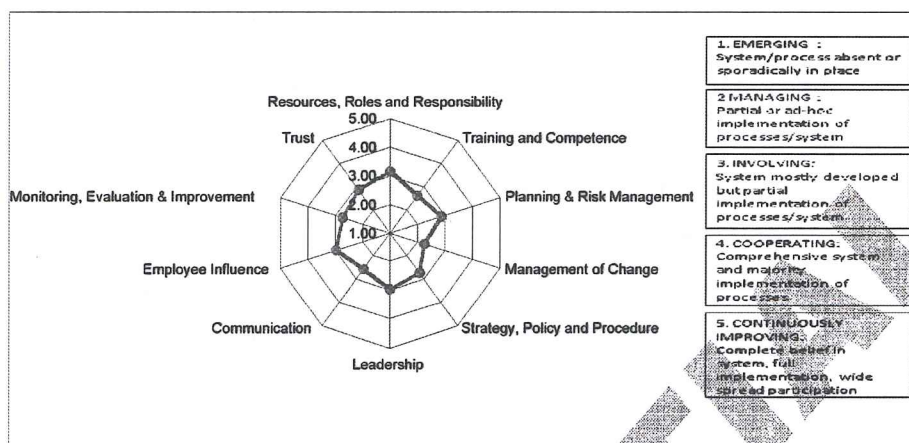
2. Key findings from the perception survey

The perception data and key findings from reviews carried out on the four aforementioned rigs plus the Divisional office have been summarised in this report. Where applicable, relevant perception data has been included in the 'Issues description' section to demonstrate support or contradiction. An in depth review of the perception data and statistical analysis has been included in the separate Statistics Report, also see Appendix F (North America Statistics Report) for further details.

Figure 2 shows a summary of the responses for the NAM Division.

Figure 2. North America perception survey results
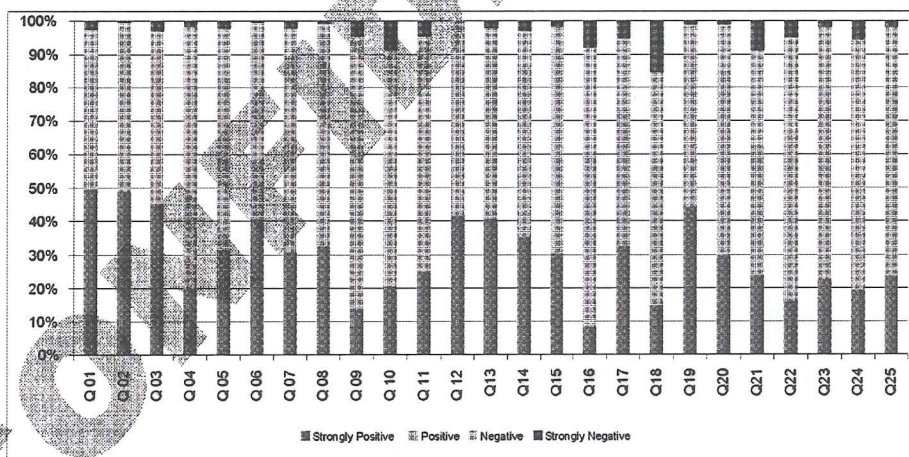
3. Key strengths and primary issues

This assessment has identified a number of strengths and issues in the North America Division, many of which are common across the Transocean business. The strengths listed in this report act as a good foundation and should be built upon to create an improvement in the way safety is managed. These strengths are expanded upon in the main body of the report.

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Strengths

Strength 1: Resources for safety

Participants had a good understanding of their broad safety roles and responsibilities. Individuals understood that they were responsible for safety and that they were accountable for carrying tasks out in a safe manner. There was also accepted responsibility by individuals for the safety of other crew members, and of the need to work together to achieve safety. The general perception was that resources required to meet safety requirements were provided; this included equipment, time to do the task safely, skilled people, and a high level of financial investment.

Strength 2: Employee influence

The overwhelming majority of participants felt empowered with regard to safety on the rig. A clear belief and commitment to safety was evident in all crews and, collectively, there was a strong culture of responsibility for safety. Safety information and safety concerns were discussed widely on the rigs, with approachable and accessible Supervisors/senior Supervisors. Almost everyone felt that safety concerns raised would be acted upon if these were in the immediate control of the rig leadership team or senior Supervisors.

Strength 3: Rig leadership

Despite several recent rig management changes onboard the rigs visited, rig leadership was generally praised by the workforce. On the DCL, the praise for rig leadership extended to the client (Chevron), who was seen to be particularly proactive in supporting safety, and in clarifying/supplementing H&S requirements with Chevron guidelines and principles.

Rig management and Supervisors were generally seen as approachable, set a good example of the company commitment to safety, and were generally highly visible. Safety was seen to take priority over operations.

Strength 4: Team trust

There were high levels of mutual trust within and between teams, and this extended from Supervisors to senior Supervisors (rig based management) and Rig Managers based in the Division. Teams often spoke of their colleagues on the rig as "family". This trust which is felt amongst the rig crews is extremely important and can help to facilitate communication and participation in critical aspects of safety management.

Strength 5: Belief in THINK, START, TOFS, and Prompt cards

On all the rigs visited, most crew members felt that the concept of THINK, START, TOFS and Prompt cards was sound, and there was a belief that these were fundamentally good risk management tools.

Primary issues

Issue 1: Hazard awareness

Hazard awareness is fundamental to the THINK, START and TOFS processes, and central to effective risk management. After discussions with the workforce at all levels, the majority of crews on the frontline reported that they were comfortable with identifying and understanding the hazards that they were exposed to. This is supported by the response to Q. 12 of the perception survey, where 92.9% responded that, because of the training and support they receive, they believe they fully understand the hazards associated with their job. However, many Supervisors and members of the rig leadership teams had concerns in this area, based on the THINK Plans they reviewed, on task observations and on the conversations that occur in the workplace (i.e. during START tours). They believed that:

- The workforce was not always aware of the hazards they were exposed to, relating to both their job and to other jobs being conducted in the same/adjoining work areas.

- THINK Plans did not always identify relevant major hazards related to that task.

- The risks posed by identified hazards were not fully understood, and the subsequent control measures were not always appropriate.

- Emerging hazards during task execution, and hazards with a changing risk level were not always detected or fully appreciated.

- 'They don't know what they don't know.'

This clearly demands attention, as frontline crews are potentially working with a mindset that they believe they are fully aware of all the hazards when it is highly likely that they are not.

Issue 2: Risk management processes

THINK is a key risk management and planning process on the rigs, and is fundamental to identifying and controlling risk prior to undertaking a task in the workplace. Overwhelming feedback suggests that the workforce supports the concepts of THINK, START, and TOFS as risk management tools. However, it was clear that there are a number of problems with the application of these tools which reduced their effectiveness. These issues include:

- Processes perceived to be over complex.

- Repetitive THINK Plans that do not add value.

- Burden of paperwork.

- The use of THINK Plans as a personal and organisational insurance, rather than a risk control mechanism.

Issue 3: START in application

The majority of the workforce believed that START was a good tool in concept and understood its purpose. Some crews saw it as a value adding tool which provided a foundation for recording daily conversations on critical safety issues. However, a significant number of crew members expressed concern over the application of START and believed that the system was being devalued. Their main concerns were:

- The policy of one START card per day from all the PoB.

- High number of made up cards being submitted into the system.

- High numbers of positive "atta boy" cards which do not offer any real learning opportunities.

- The majority of corrective action cards focus on low risk safety issues (e.g. trailing hand technique, untidy equipment state) and not on major hazards.

- START cards are not often used to log safety behaviour conversations which are taking place.

- The system creates a significant amount of paperwork which adds to the workloads of Supervisors and RSTCs, reducing time for mentoring and supervising.

- The START card system is seen in a negative light and many crews still feel like they 'tell tales' on others instead of viewing it as a learning opportunity.

> Lack of feedback on submitted cards.

> The START card data used for monitoring assessments is seen as low quality, and is distorting rig specific safety issues and trends.

> Overall, there is a feeling that the system has become devalued and there is no sign of changes being made to correct this.

Issue 4: Learning organisations issue

The majority of participants felt that START, TOFS, audits, near-hits and incident investigation were valuable sources of information to help prevent incidents from happening again, and to support performance monitoring. Although monitoring and evaluation are key risk management tools, there were issues about monitoring parameters, the accuracy of data being captured, its value and use as feedback for improvement. Observations made by crews and by the LR EMEA reviewers indicated that there are internal barriers that will reduce the overall effectiveness and efficiency of feedback data. This will ultimately increase the risk of incidents and delay the achievement of performance objectives. These barriers include:

> Barriers to reporting, investigation and follow-up.

> The ineffective use of START as a monitoring tool.

> The ineffective planning and delivery of audits (including PMAAs).

Issue 5: 2-Way Communication

The cascade of safety critical information from senior management to the frontline workforce is a fundamental aspect of business management. The style, method and application of these communications and the feedback from the workplace are critical to the management of risk. The LR EMEA review identified a number of areas relating to communication and consultation which require the attention of the Divisional leaders. The issues included:

> Initiative overload: the volume of information that is communicated to the rigs.

> Negative associations: there is a perception on the rigs that all communication from Corporate or Division is bad news. Whilst this is obviously not the case, the inference is that there is an imbalance between criticism and corrective needs, and recognition of good performance.

> Consultation and involvement: the offshore crews largely feel distanced and detached from decisions and changes that affect them.

Issue 6: H&S Manual

Lloyd's Register EMEA has already released a report covering the findings from a review of the content of the H&S Manual.

Although some Supervisors and management level employees found the content of the H&S Manual useful, they raised concerns with regards to its usability. It was evident that crews had the best intentions and wanted to be compliant with all that is required in the H&S Manual. However, they found this difficult to achieve and relied on additional support from the RSTC or their Supervisors. The key concerns were that the content of the document is:

> Unstructured and had no clear visual overview of the SMS, with its goals and aims.

> Hard to navigate.

> Not written with the end user in mind (language and tone).

> ➤ Written in an ambiguous way which makes it hard to determine correct implementation.

> ➤ Poor distinction between 'what' is required and 'how' this should be achieved.

> ➤ Updated frequently, or perceived to be, and hard to keep up with changes.

> ➤ Always added to and nothing taken away or consolidated.

> ➤ Difficult to access the latest version of the manual for crew members with no computer access.

As a result of these issues, a proportion of the workforce only referred to the H&S Manual occasionally and some crews were unknowingly consulting an out of date Manual.

Issue 7: Management of Change (MoC)

Many organisations face continuous change in order to meet their business objectives in a competitive market place. Successful change is, therefore, critical to business. An organisation's ability to embrace and facilitate change is paramount to safe and efficient operations. Poorly managed change will ultimately reduce performance and have a detrimental effect on safety. Feedback from participants during the review of NAM operations (both on and offshore) consistently suggested that Transocean has some Division-wide change management challenges, and that there is considerable scope for improvement.

These MoC challenges include:

> ➤ Engineering change.

> ➤ Procedural and process changes.

> ➤ Organisational change.

> ➤ Task changes.

Specific issues related to:

> ➤ Change planning.

> ➤ Frequency of change.

> ➤ Communication and consultation.

> ➤ Change implementation.

> ➤ Follow-up and support.

Issue 8: Blame culture and trust

Worryingly, a significant proportion (43.6%) of the personnel participating in the perception survey reported that they worked with a fear of reprisal if an incident or near hit occurred. This issue is strongly related to the investigation process, which nearly 40% of the participants believed was applied to apportion blame (NB: for the same question, none of the Divisional office felt that this was the case). Furthermore, interviews revealed that this reported fear of reprisal was often associated with potential dropped object incidents. Although high levels of trust were reported at rig level, there was a significant level of reported mistrust between the rigs and the beach.

This perceived blame culture and the associated trust issues have knock-on effects for safety management.

Issue 9: Leadership skills

Leadership competencies are currently based predominantly on technical criteria associated with the knowledge and skills requirements. Leadership skills are essential in the creation of an inclusive safety culture.

A training matrix is maintained for each crew member, which consists of a series of beach based training courses and rig based OJT modules. As personnel move up the organisation to Supervisor level and above, there are no defined criteria, measures or training associated with the leadership skills required for people and process management, particularly the non-technical skills. Some examples of leadership skill categories have been listed below:

> - Motivation skills.
> - Communication skills.
> - Coaching/mentoring.
> - Team building.
> - Conflict resolution.
> - Resource management.

It has been reported that these elements are considered in an informal manner when considering candidates for promotion. However, this process is subjective and can be more prone to inconsistencies. There was no evidence to suggest that these elements were adequately factored into the recruitment or succession planning processes, competency management processes or training and development programmes.

Primary issues – summary

Many of the primary issues can typically be traced back to practices and policies that originate at Divisional and/or Corporate levels. Some issues can, themselves, cause knock-on effects, giving rise to weaknesses in other areas of safety management practices – a weakness in one area has a negative impact on performance in another. Figure 3 overleaf shows a diagrammatic representation of the relationship between the issues. Where an issue acts as a driver to another issue, it has been represented via a connected arrow. For example, poor hazard awareness of some rig frontline staff can lead to problems in detecting changes to task conditions (MoC) and, hence, raises the risk of failing to properly manage risks during those tasks (START in application). While the LR EMEA review identified a number (9) of primary issues, it can be seen from the diagram overleaf that a fundamental lack of hazard awareness underpins many of the issues in the North America Division. More information about the relationship between issues is contained in the 'Issues description' section.

Figure 3. Issues relationship
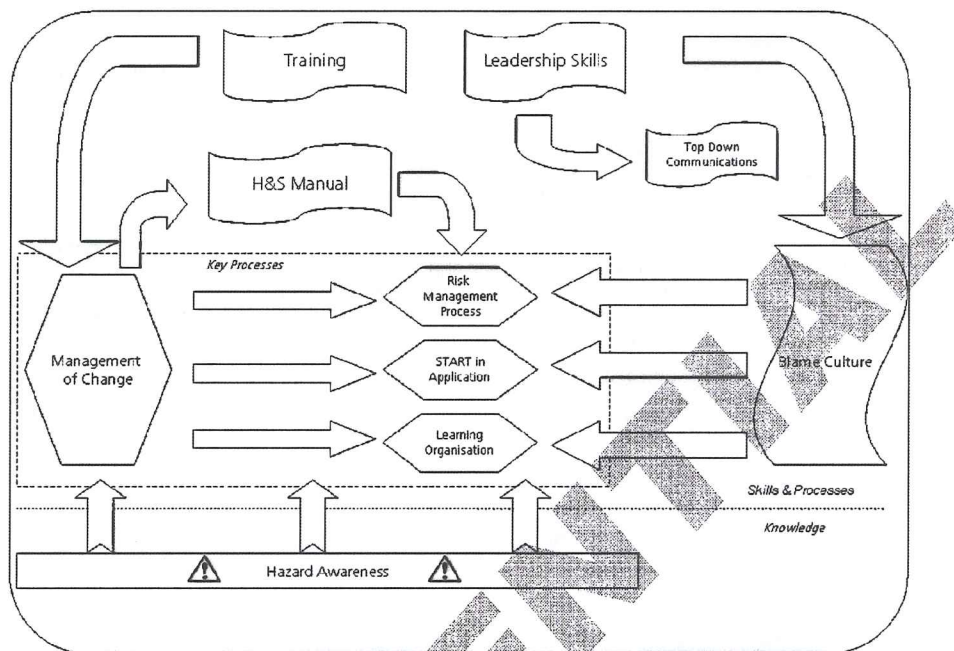
The Division will need to understand these issues and work with both the rigs and with Corporate if improvements are to be realised. Critical areas involving Leadership Skills, Communication, Blame Culture, Management of Change, and the Risk Management processes will have to be addressed. However, underpinning all of these issues is a fundamental problem with the levels of hazard awareness of some frontline crews that were evident, particularly once a task was underway. It is also noted that the issue relating to the H&S Manual must be specifically addressed by Corporate rather than Division.

LR EMEA will issue a Company Recommendations Report which will detail suggestions for continued improvement that the North America Division should address.

Introduction

Overview

Lloyd's Register EMEA has been contracted by Transocean to conduct a comprehensive review of the effectiveness of Transocean's current safety management approach. This involved a review of both top down and bottom up processes i.e. the Safety Management System (SMS) contained within the Company Management System (CMS), its implementation and use by the workforce (safety climate). The activities focused on the practical implementation of the SMS as part of the CMS and the understanding, attitudes and perceptions that reinforce and support its use.

There is a distinction between safety culture and safety climate. Safety culture is enabled through the SMS, the commitment of the management and leaders in supporting the SMS, and the policies and procedures. The safety climate assessment reveals the perception of safety management by crew and contractors, its credibility and the beliefs and values that it engenders and reinforces. The work will review and assess the safety climate and the safety culture within Transocean.

On the 9th to the 26th March 2010, a team from Lloyd's Register EMEA visited the North America division consisting of the Transocean Divisional Office in Houston and four Transocean MODU's located in the Gulf of Mexico (GOM). The drilling rigs which participated in this LR EMEA review were:

- Transocean Marianas.
- Deepwater Horizon (DWH).
- Development Driller II (DDII).
- Discoverer Clear Leader (DCL).

Document scope

This document presents a summary of the strengths and weaknesses related to safety system implementation in the North America Division and the psychological and system drivers behind it.

The report process covers:

1. Individual rig reports for the 21 rigs selected for the review addressing the findings of the LR EMEA review.

2. Divisional Reports (5) addressing the collated findings from the rigs and Divisional offices.

3. Methodology Report describing the processes applied during the reviews.

4. Statistics Report containing a statistical analysis of the data gathered during the review (reference to document).

5. Recommendations Report containing recommendations to address the review findings and suggestions for continual improvement.

Figure 4 overleaf provides an overview of the document hierarchy for the Safety Management and Safety Culture/Climate Reviews. The NAM Divisional Report has been highlighted to indicate its location.

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Figure 4. Document hierarchy

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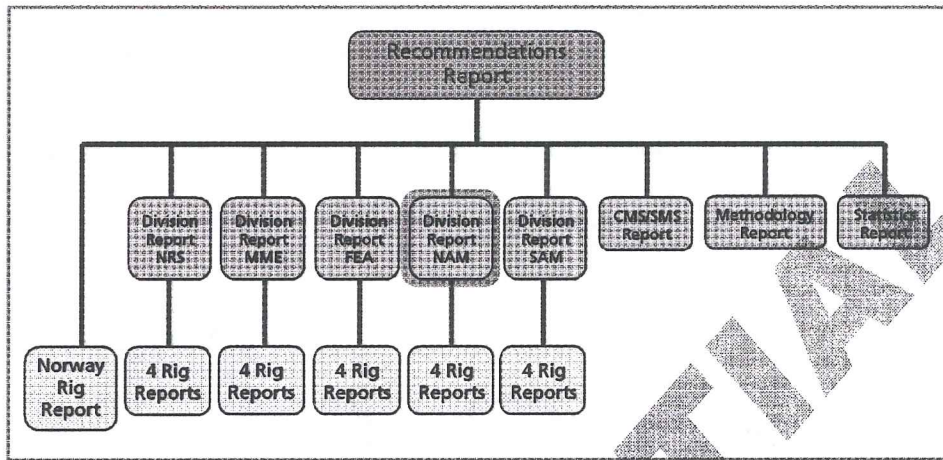
Methodology

Overview of the review tool

An investigation tool was developed specifically for this review of Transocean's safety systems to form the basis of the overall assessment of the SMS and safety culture. This enabled a consistent approach to be taken by the LR EMEA review teams and incorporated a scoring system to allow a quantitative aspect to the LR EMEA review. Semi-structured interviews were used to gain a deep understanding of the practical strengths and limitations of the SMS, safety culture and resulting climate. Figure 5 provides a graphical overview of the tool.

Figure 5. SMS, safety culture and safety climate review tool
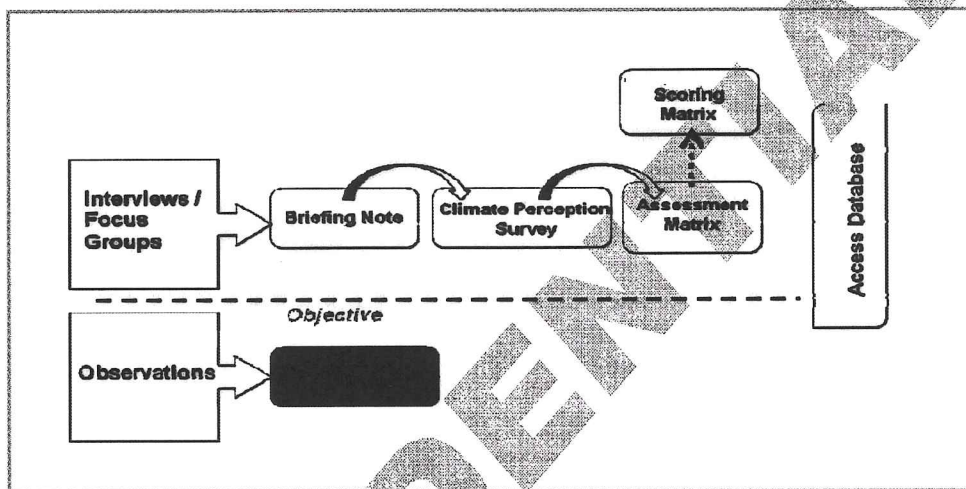
The assessment was carried out using subjective and objective data capture methods. The subject data capture consisted of:

- Structured interviews and focus groups with Transocean workforce at all levels of the organisation.
- A perception survey filled out by all people taking part in the interviews and focus groups.

The objective data was captured via observations of the key safety processes and meetings. A complete description of the Lloyd's Register EMEA approach to this review is contained in the separate Methodology Report.

Personnel, operational areas and processes sampled

This section provides an overview of the interviews, focus groups and observations that were sampled as part of the North America safety review.

Focus groups and interviews carried out in the North America Division have been listed in Table 1 overleaf. Throughout this review, there was a set target of 30% of the population that were required to take part to ensure significance in the findings. This target was achieved for every rig visited. However, it was not appropriate to use the same target for the Divisional office as there were some roles that were unrelated to safety management.

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Table 1. Summary of interview and focus group numbers

Location	People interviewed	Focus groups	Percentage of POB	Total
Deepwater Horizon	14	27 (7 Groups)	32%	41
Transocean Marianas	5	50 (12 Groups)	43%	55
Development Driller II	12	39 (10 Groups)	31%	51
Discoverer Clear Leader	19	40 (8 Groups)	34%	59
Divisional office	20	6 (1 Group)	N/A	26
Total	70	162	N/A	232

Operational areas and processes sampled during the assessment are summarised as follows:

- Senior Management.
- QHSE Department.
- HR Department.
- Rig Management.
- Engineering support.
- Drilling.
- Marine.
- Maintenance.
- Deck.
- Third party service companies.
- Contractors (catering).
- Company representatives.

Meetings, discussions & drills:

- Daily meetings/weekly meetings pre-tour (morning and evening), morning meeting with company man, Supervisors meetings, client meetings, tool box talks, Departmental (including third party service hands), weekly safety meetings, general rig weekly safety meeting.

- Informal meetings and discussions with personnel and physical condition observations.

- START observations (e.g. mud loading in the sack room).

- THINK Plan development and observations (review of a sample of THINK Plans, engine de-isolation, heavy lift drill pipe from the conveyor).

- Informal observation of operational activities (e.g. checking hydraulic pressures on the riser tray, running casing, crane lifting operations (from supply boat and around deck), heli-ops, supply boat ops, crane ops, drill pipe layout, welding).

- Observation of weekly General Platform Alarm/Abandon Platform alarm drill and scenarios.

Documentation and processes:

- H&S Manual, START Cards, THINK Plans, TSTPs, Prompt Cards, PTW certificates etc.

- MSDS.

- Training matrix, OJT training modules and supporting records.

- Daily START and THINK reports.

Please note that this report refers to various categories of the workforce who were interviewed as part of the LR EMEA review process. They included:

- Senior management (Divisional personnel other than Rig Managers).
- Rig management (Rig Managers, OIMs, Captains, Chief Engineers, Senior Toolpushers etc.).
- Supervisors (Tourpushers, Drillers, Assistant Drillers, Deckpushers, Crane Operators, Deckpushers, Chief Mates etc.).
- Specialist support (RSTCs, Medics etc.).
- Frontline crews (Deckhands or Roustabouts, Floorhands, Derrickmen, Mechanics, Electricians, Electrical Technicians, Motormen, Welders, Painters, Seamen etc.).
- Contractors (hired by Transocean).
- Client representatives.
- Third party (client contractor).

Perception results analysis

Overview

This section presents the results from the perception survey in the North America division. This is intended as a high level summary of the key strengths and weaknesses. For further detail related to the organisational level and specific topic domain differences between rigs, see the Statistics report and details in Appendix F (North America Statistics Report)

North America perception survey results

Two hundred and twenty-five personnel that participated in the questionnaire survey and the results are summarised in Figure 6 below. A full list of the questions can be found at Appendix A.

Figure 6. North America perception survey results
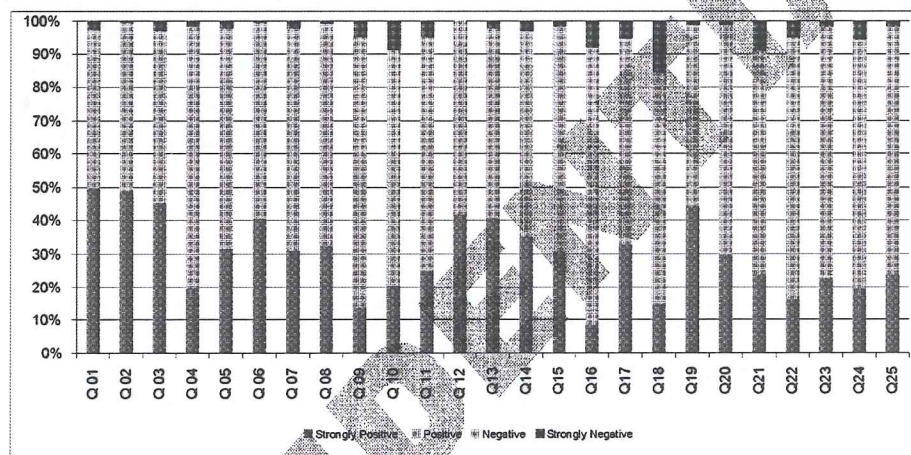
Strengths

Of the 25 questions that crews were asked, eight were responded to positively (positive or strongly positive) by more than 90% of the participants. Of the eight high scoring questions, three of these exceeded 95% positive agreement:

Q. 2 – "I am encouraged to raise ideas and suggest safer ways of doing things at work";

Q. 8 – "I participate in the changes to working practices that affect me"; and

Q. 6 – "My line manager listens and acts on my safety concerns".

All eight high scoring questions are shown in Table 2 overleaf.

Table 2. The most consistent positive perceptions in the North America Division

Q #	Questions	Area	Strongly Disagree	Disagree	Agree	Strongly Agree	% positive
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		3.1%	47.6%	48.9%	96.4%
8	I participate in the changes to working practices that affect me.	MoC		3.6%	63.1%	32.4%	95.6%
6	My line manager listens and acts on my safety concerns.	COM		4.0%	55.2%	40.4%	95.5%
12	Because of the training and support I have received, I fully understand the safety procedures and hazards associated with my job.	TRA		7.1%	51.3%	41.5%	92.9%
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA	46.4%	54%			91.5%
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		7.2%	60.4%	30.5%	91.0%
13	There are not sufficient resources (equipment & money) for me to carry out my job, identify and manage risks safely.	RRR	40.6%	50.0%	7.1%		90.6%
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP	46.4%	46.0%	3.5%		90.2%

Key: EMP – Employee influence, MoC – Management of Change, COM – 2-Way communication, TRA – Training and competence, LEA – Leadership, RRR – Resources, roles & Responsibilities, SPP – Strategies, policies and procedures.

These questions are briefly discussed below.

Q. 2 – 96.4% of participants believed that they were encouraged to raise ideas and suggest safer ways to do things at work. During interviews, a strong sense of cohesion and trust within and between teams emerged, with open and frank communication, which lent support to the view that, on the rig, the feeling of participation and involvement in achieving safety goals is generally very strong. This positive response indicates high levels of employee influence at rig level (although not above this), which is also aligned with the reviewers' findings.

Q. 8 – 95.6% of participants agreed or strongly agreed with the statement "I participate in the changes to working practices that affect me", suggesting a strong sense of involvement in changes that have occurred in working practices. However, this question may have been slightly misinterpreted by participants to mean "I participate in the changed practices", rather than "I participate and am involved/consulted in the changes to working practices". This would be supported by the finding that approximately 60% of staff felt they were not always informed of the outcome of changes that affect them (Q. 9 – ranked in the three lowest scoring questions), and from other data gained from interviews, where a significant number of people felt that changes were imposed on them and their involvement in the rationale for changes was low.

Q. 6 – The majority of the workforce indicated that they were well supported in a number of key areas, particularly by their Supervisors and line managers. The majority of participants (95.5%) believed that their line manager listened and acted upon their safety concerns, again indicating a level of trust in line managers, and of a strong concern for safety, which was borne out in the interviews. Q. 2 and Q. 6 together suggest a strong sense of involvement in a positive, open and receptive management environment. Levels of trust in line managers and leaders were also strengths that were consistently revealed during review interviews.

Participants were positive regarding the two questions relating to training and competence (Q. 12 and Q. 15), with positive response scores in excess of 90%. For example, on Q. 12, 92.9% believed that the training and support they have received has helped them to 'fully' understand the safety procedures and hazards associated with their tasks. On the face of it, this would strongly suggest that the workforce feel competent in hazard identification and awareness; however, some caution is required here. During interviews, some rig based senior Supervisors and shore based rig managers from Division, reported that

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they had concerns around hazard identification skills among some frontline crew, suggesting a mismatch between the crews' perceptions and Supervisors' observations arising from THINK planning processes and task execution and/or START observations. On the flip side to Q. 12, the survey responses indicated that approximately 7% of offshore based participants (equating to 16 people overall) admitted to not fully understanding the hazards associated with their job, or to not feeling that training and support per se had given them that knowledge.

For Q. 15, 91.0% of participants believed that they must demonstrate that they can do their job safely before they are considered competent. This result is very positive in that it highlights a level of understanding of competence measurement and the need to demonstrate their competency through their behaviours and actions in the work place. However, this leaves almost 10% of the participants who felt they did not have to demonstrate competence. Possible interpretations here would be that either a small pocket of participants (9%) felt that their qualifications alone were sufficient to demonstrate competence, or possibly that they did not feel that their safety competence had been taken into account when they were assigned to work tasks or were promoted.

The vast majority of the participating workforce (91.5%) believed that management felt the safety of individuals is of greater concern than operational performance (Q. 3). This demonstrates strong leadership in creating a culture where people believe that safety is of paramount importance and a clear priority, even during down time (although there was some mixed feedback about this during interviews). Further evidence in support of this was a dominant perception by personnel that there are sufficient resources (in terms of equipment and money) to safely carry out work through the identification and management of risks (Q. 13 – 90.6% believed this was the case). Conversely, nearly 10% felt there were inadequate resources for safety.

There were isolated reports during interviews of cases where it was perceived that commercial decisions were given a priority over safety. One example related to operational decisions to repeatedly defer the replacement of a 25 year old crane onboard the Marianas, which, it is believed, eventually underwent an overhaul instead. Crews from Marianas cited another example where repair work in the immediate vicinity of the moonpool was planned and scheduled during dry-dock modifications, but deferred for commercial reasons and completed offshore. The rig based workforce resented this decision, because it meant they had to erect scaffolding and carry out extended repair work over water within the moonpool. The rationale supporting this decision had not been fully explained and, therefore, it did not deter from the perception that this operational decision took precedence over the safety of the offshore crews.

Evidence from the review indicated that the need to incorporate safety requirements into everyday tasks is a strongly held belief: 90.2% felt that they would not be confident to take shortcuts when carrying out certain tasks (Q. 19). This indicates a strong drive to follow the required policies and procedures when doing work – evidence of a "compliance culture". However, almost 10% indicated that they do feel confident to take shortcuts, although this doesn't necessarily mean that those people would actually deliberately side-step required tasks: just that they felt confident enough to do so.

Weaknesses

Overall, there were five questions in the perception survey for which a significant portion of the workforce did not report positive answers (around 40-46% of participants were negative). These are shown in Table 3 overleaf.

Table 3. The weakest perceptions in the North America Division

Q #	Questions	Area	Strongly Disagree	Disagree	Agree	Strongly Agree	% positive
24	Some of the workforce is uncomfortable with calling a TOFS when unsafe situations occur.	RIG		34.7%	40.1%		54.1%
18	If my actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), I feel I could report this without any fear of reprisal.	TRU		28.0%	41.8%	14.7%	56.4%
9	I am not always informed of the outcome of changes that affect me.	MoC	13.8%	45.3%	36.0%		59.1%
16	Transocean rewards me when I carry out my work safely.	LEA		31.3%	52.1%		60.4%
10	There are too many steps in place to manage risks.	PRM	20.4%	40.4%	30.2%		60.9%

Key: TRU – Trust, MoC – Management of Change, PRM – Planning and risk management, LEA – Leadership, RIG – Rig specific.

The results of Q. 16 suggest that almost 40% of staff do not feel rewarded for carrying out their work safely. This could be related to the safety points scheme, which many felt was neither transparent nor fair.

Note: 37.7% of offshore workers agreed with Q. 21 – "The purpose of incident investigations is to determine who is to blame and should be disciplined". No-one at Divisional level agreed with Q. 21, clearly showing a mismatch between the reported intentions of managers onshore, and the perceptions of those affected by, or indirectly experiencing, incident investigations offshore.

More than half of survey participants (i.e. more than 112 people) believed some of the workforce was uncomfortable with calling a TOFS when unsafe behaviours occur (Q. 24). It is not clear how many would feel uncomfortable calling a TOFS when one should be called. The interviews discovered that there were perceived psycho-social barriers to calling a TOFS, which may prevent the proper execution of a key risk management process. These perceived barriers could be related to the levels of competence in hazard identification and the ability to quickly recognise and assess risks in a dynamic work environment. They could also be related to personality/hierarchy issues (e.g. not having the confidence to call a TOFS, or not wanting to call a TOFS on a more senior person, or believing someone else will call it).

Q. 9 relates to the Management of Change (MoC), with 40% of participants reporting that they were not informed of the outcomes of changes that affected them. The interviews with participants suggested that this result related partly to the perceived poor management of procedural and organisational change (e.g. of task THINK Plans and JSAs following the merger) rather than engineering change, which was seen to be better managed. Offshore participants frequently reported that the rationale for change was not adequately explained. Interestingly, the perception onshore in the Divisional office was that changes, and the supporting rationale, were explained to the offshore workforce. It is recognised that there are practical difficulties in communicating information to the entire workforce across shifts and hitches, which may not be seen to have safety implications, but the need for greater involvement and consultation with rig based workforce is felt to be an issue.

Nearly 40% of participants felt there were too many steps in place to manage risks (Q. 10). This was confirmed during interviews with participants, where some felt that the THINK process could be confusing and protracted. It was not always clear why a relatively simple task might require a written THINK Plan, plus a TSTP, plus a PTW and isolation certificates. This led to the workforce perception of an excessive administrative burden. Worryingly, a significant number of people believed that the purpose of THINK Plans was to "cover their backs" in the event that an incident should occur, stating that the first thing that is asked for in the event of an incident is the relevant THINK Plan, with the list of hazards identified.

Related to the above finding is the perception held by 43% of participants that, if their actions led to a potentially risky situation, they would be concerned about reporting it for fear of reprisal (Q. 18). This

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lack of trust in the incident investigation processes can potentially undermine risk management, hampering Transocean's ability to effectively monitor and learn from events.

Other noteworthy responses include Q. 14, where 13.3% of participants indicated that they did not have enough time to do their job according to rules and procedures. Almost 87% believed there was enough time to work according to rules and procedures, whilst a minority of participants voiced concerns and frustrations over the time demands. Some Supervisors felt that they were overburdened by administrative tasks which prevented them from supervising, coaching and mentoring their crews. It is also likely that the feedback to Q. 14 has linkages with the widely held belief that risk management processes are too complex (Q. 10).

An additional weakness was that nearly 20% of participants felt that there were not always enough people to carry out work safely. This may relate to the issues discussed above (high administrative work loads and over complex risk management procedures), but could also relate to the perception that some of the frontline crew members with poor hazard awareness required greater levels of supervision, which resulted in further demands on time.

Reviewer scoring

Each interview and focus group has been scored against each of the ten key topic areas. The scoring system uses a five point ordinal scale:

1. Emerging (system/process absent or sporadically in place).

2. Managing (partial or ad hoc implementation).

3. Involving (comprehensive but partial implementation).

4. Cooperating (comprehensive and majority implementation).

5. Continuous improvement (complete belief in system, full implementation and widespread participation).

For full details of the allocation of these scores, please refer to the Methodology Report. This section provides a summary of the average assessor scores for the North America division.

When considering these results, it is important to ensure an appropriate interpretation is taken. These results are intended to identify areas of opportunity for improvement. Lloyd's Register EMEA is not suggesting that Transocean should aim to obtain a score of 5 (Continuous Improvement) in the ten key topic areas. Achieving a score of 5 would require significant investment and quite possibly be inappropriate for a business such as Transocean.

Instead, these scores should be used for the following:

- To enable prioritisation for improvement measures to be taken.

- To provide justification for the areas for improvement identified in the 'Key weaknesses' section.

For further detail related to the organisational level and topic domain differences, see the Statistics Report.

North America review results

Figure 7 shows a spider diagram of the average scores for each of the ten key topic areas for the interviews conducted in the North America Division.

Figure 7. North America review data
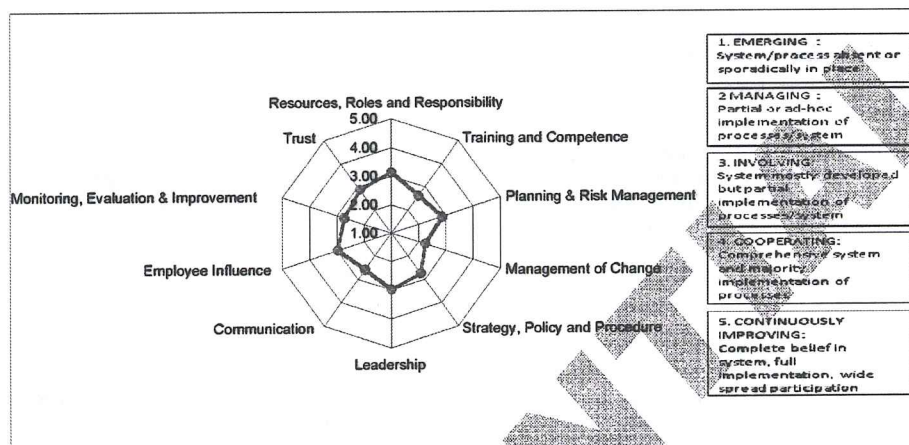
As the graph shows, whilst there were slight variations in the scores, the reviewers scored nine domains as a Level 3 (Involving), and one as a level 2 (Managing) in the maturity matrix. 'Resources, Roles and Responsibilities', 'Employee Influence' and 'Leadership' scored highest out of the ten domains and 'Management of Change' scored the lowest (2.2). There were slight variations across rigs (see Statistics Report for further information).

Key strengths

Overview

There were five common strengths that were consistent across all the areas visited as part of the North America Division review. The strengths act as a good foundation for safety and can be built on to create an improvement in the way safety is managed. This section provides a summary of these areas.

Strength 1: Resources for safety (Resources, roles and responsibilities)

Description

Participants had a good understanding of their broad safety roles and responsibilities. Individuals understood that they were responsible for safety and that they were accountable for carrying tasks out in a safe manner. There was also accepted responsibility by individuals for the safety of other crew members, and of the need to work together to achieve safety.

Individuals generally felt that sufficient resources were provided to meet safety requirements. These resources included:

- Equipment – the provision of safety related equipment such as PPE, harnesses etc. was perceived as good. Sufficient equipment was available and the workforce thought the quality of it was generally appropriate. However, one example where resources were not perceived to be made available related to apparent operational decisions to repeatedly defer the replacement of a 25 year old crane onboard the Marianas. It is believed that it eventually underwent an overhaul instead. There were also some issues raised about the availability of some equipment and tools.

- Time – overall, very few staff felt they were put under time pressure that would cause a safety concern, particularly during down time. People felt that, recently, a lot more emphasis was put on doing tasks safely rather than quickly. They were generally positive about the time made available to plan, risk assess and carryout their operations safely. However, some members of the maintenance crews felt that they were indirectly pressured, at times, by those on the drill floor to get work completed quickly. Also, feedback from DDII highlighted an issue with time pressure, specifically when down time was approaching.

- People – generally, the workforce thought that there was a sufficient number of staff to manage safety. There were, however, some questions surrounding the retention of skilled personnel, competency levels of some personnel, and of processes in place for competency development and assurance.

- Money – the level of investment in safety by Transocean was seen as class leading; some staff felt that the fact that the current Lloyd's Register EMEA study was being carried out was further evidence of that commitment.

The workforce was also comfortable requesting additional resources, when required, and they had a strong belief that, in the majority of cases, these requests would be met by appropriate action.

Strength 2: Employee influence

Description

The overwhelming majority of participants felt empowered with regard to safety on the rig. A clear belief and commitment to safety was evident in all crews and, collectively, there was a strong culture of responsibility for safety. Safety information and safety concerns were discussed widely on the rigs, with approachable and accessible Supervisors/senior Supervisors. Almost everyone felt that safety concerns raised would be acted upon if these were in the immediate control of the rig leadership team or senior Supervisors.

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However, employees reported that they felt little influence at Divisional or Corporate level. There were some cases where deep frustrations occurred due to an inability to influence Divisional level – e.g. Divisional IT, and where this was felt to be impeding the ability to get work done effectively.

Strength 3: Rig leadership

Description

Leadership

Despite several recent rig management changes onboard the rigs visited, rig leadership was generally praised by the workforce, although there were some exceptions. On the DCL, the praise for rig leadership extended to the client (Chevron), who was seen to be particularly proactive in supporting safety, and in clarifying/supplementing H&S requirements with Chevron guidelines and principles, which were discussed during Supervisors' meetings and posted on safety noticeboards.

There was a clear demonstration of prioritising safety over production, including, for example, on DCL where operations were suspended until risks from dropped objects from the derrick were under control, involving a full review of the design and build of the derrick.

Rig management and Supervisors were generally seen as approachable, set a good example of the company commitment to safety and were generally highly visible. Consistency was judged to be predominantly good, however there were exceptions where this was not always the case, especially when it came to translating and interpreting policy and procedures requirements.

Most of the rig management team were reported to conduct regular START tours, and interviews with Supervisors reinforced the message that they felt it was important to get out and speak to the crew. The Supervisors promoted an "open door policy" and this was confirmed by the operational crew who felt that they could approach their Supervisors and other management on issues of concern. Additionally, there was a good level of filtering of information by the OIM and Supervisors to ensure that the rig workforce was not bombarded with irrelevant information. The rig leaders and Supervisors, however, continually had to address requests from the beach, new initiatives and complex communications. This perceived administrative overload was felt, by senior rig Supervisors, to be impacting on their ability to get out on deck to conduct monitoring, supervising and other leadership tasks.

Despite the generally positive feedback about leadership, some worrying concerns were voiced about the failure to clarify what were perceived to be vague policies and procedures within the H&S Manual. In addition, leadership styles were occasionally noted as being autocratic, dogmatic, and not necessarily supportive; this finding, in particular, is discussed in Issue 9: Leadership skills.

Strength 4: Team trust

Description

There were high levels of mutual trust within and between teams, and this extended from Supervisors to senior Supervisors (rig based management) and Rig Managers based in the Division. Teams often spoke of their colleagues on the rig as "family". The same feelings are not evident between the rig teams and the personnel based in the Divisional and Corporate offices. This trust which is felt amongst the rig crews is extremely important and can help to facilitate communication and participation in critical aspects of safety management. However, the levels of trust need to be carefully managed and influenced, and can be very easily damaged (e.g. by inappropriate blame culture, lack of consultation and influence in planned changes, inability to influence at the Divisional level, the feeling that communications are only top down etc.).

For example, on the DWH there was no evidence of a fear of reporting injuries or near hits, with the exception of dropped objects. On other rigs, however, there was a general sense of a fear of reporting, that stemmed from actions originating at Divisional level.

It should be noted, however, that on some rigs there were a number of comments relating to cliques and 'circles of protection' which specifically related to instances of favouritism. This will undoubtedly have an impact on intra-team trust.

Strength 5: Belief in THINK, START, TOFS, and Prompt cards

Description

Across all the rigs visited, most crew members felt that the concept of THINK, START, TOFS and Prompt cards was sound, and there was a belief that these were fundamentally good risk management tools. That being said, problems arose with a perceived lack of clear instruction relating to use of the tools, as well as consistent and high quality implementation.

Primary issues

Overview

There were several common issues that were fairly consistent across all the rigs and drill ships visited as part of the North America Division review. This section provides:

- A description of each issue.
- How it affects safety.
- The drivers which cause or contribute to the issue.

After the explanation of each driver, the origins for the driver have been identified. It is important to note that this LR EMEA review did not conduct interviews at the Corporate office. Therefore, confirmation of the origins of the driver was not able to be fully investigated with corporate staff.

Issue 1: Hazard awareness (Planning and risk management; Competence assurance)

Description

Hazard awareness is fundamental to the THINK, START and TOFS processes, and central to effective risk management. After discussions with the workforce at all levels, the majority of crews on the frontline reported that they were comfortable with identifying and understanding the hazards that they were exposed to. This is supported by the response to the perception survey (Q. 12), where 92.9% responded that, because of the training and support they receive, they believe they fully understand the hazards associated with their job. However, many Supervisors and members of the rig leadership teams had concerns in this area, based on the THINK Plans they reviewed, on task observations and on the conversations that occur in the workplace (i.e. during START tours). They believed that:

- The workforce was not always aware of the hazards they were exposed to, relating to both their job and to other jobs being conducted in the same/adjoining work areas.

- THINK Plans did not always identify relevant major hazards related to that task.

- The risks posed by identified hazards were not fully understood and the subsequent control measures were not always appropriate.

- Emerging hazards during task execution, and hazards with a changing risk level, were not always detected or fully appreciated (see also Issue 7: Management of Change).

- 'They don't know what they don't know.'

This clearly demands attention, as frontline crews are potentially working with a mindset that they believe they are fully aware of all the hazards when, in fact, they are not. It goes without saying that robust hazard identification is fundamental to the effectiveness of risk control processes, which can be impacted in a number of ways, including:.

- THINK – failure to identify relevant hazards or properly assess risks will lead to absent or inappropriate risk control measures.

- START – reduced ability to effectively monitor the task execution within the work environment to detect new hazards or changed risks, will lead to increased risk exposures.

- TOFS – reduced ability to recognise unsafe situations will lead to delayed or no action, hence increasing risk.

This issue influenced the 'Training and Competence' and 'Planning and Risk Management' assessor scores for NAM overall, which were 2.6 (Involving) and 2.8 (Involving), respectively.

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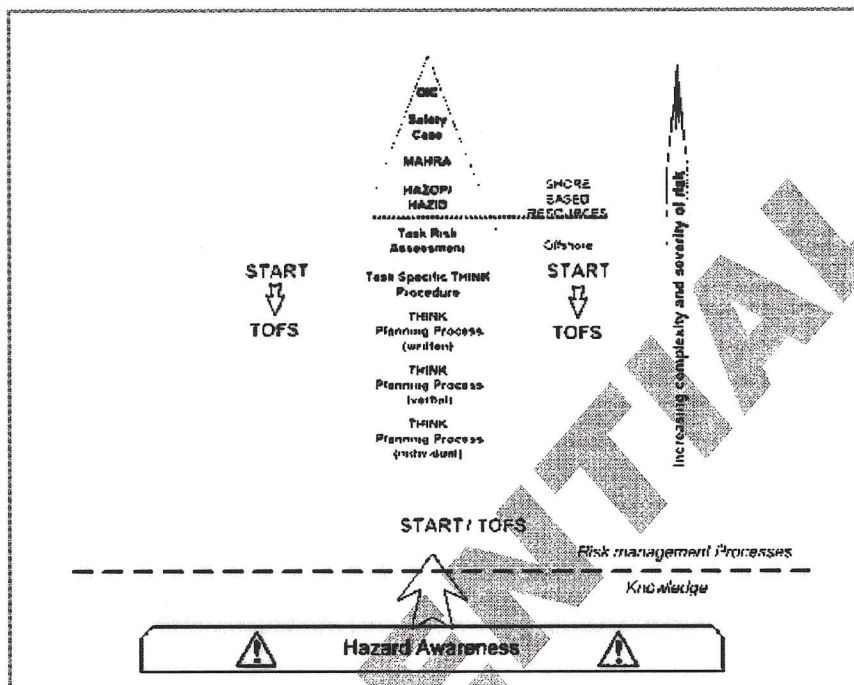
Figure 8. Hazard awareness impacts risk management processes

Issue drivers

There are several underlying causes (drivers) which contribute to poor hazard awareness on the rigs. These are discussed below, together with an indication of where in the organisation the driver originates and, hence, can be most effectively tackled.

Workforce mobility

The recent upturn in the energy industry has increased the demand for, and mobility of, drilling and exploration personnel. One of the consequences is that average experience levels on rigs have been affected, due to individuals either leaving or getting early promotions and an influx of new starters brought in to fill gaps. The areas under the direct control of Transocean are criteria for promotions, and the management of the workforce who are moved to other roles/locations, or impacted by a move. Competency management is relevant here (see below). Crew members are currently eligible for promotion when relevant modules have been completed on their training matrix. However, there are no explicit 'experience' requirements incorporated into the competency system or the promotions system. This may result in the promotion of people into supervisory positions who are not yet at the level of competence that is required to effectively mentor and supervise crews in critical risk management activities.

Driver origin: **Corporate/Divisional/Rig.**

Workforce competency assurance processes

Successful hazard identification and appropriate levels of risk awareness are achieved by a combination of knowledge, skills and experience. People working in hazardous environments must be able to maintain a high level of situational awareness in order to understand risk and how risk levels can change as new hazards emerge. Feedback within NAM Division suggests that, in many areas, the level of

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hazard and risk awareness is low amongst some of the frontline workforce. This is clearly an exposure for NAM Division. While activities exist in areas like the buddy system, mentoring, active supervision, TOPS School, and OJT, there is no evidence to suggest that there is a joined up and robust process to assure competence in hazard/risk awareness.

Driver origin: **Corporate/Divisional.**

Training and mentoring

- It has been reported that Transocean training courses could better prepare the workforce to identify hazards, risk assess them and control them with appropriate measures. Currently, the training courses, including TOPS school, pay high levels of attention to the THINK, START and TOFS as key rig processes. However, the actual workplace specific training in hazard identification and risk management is not considered sufficiently detailed or assured. The hands on experience in applying the tools occurs once an individual steps onto the rig, and is currently gained and managed under the buddy/mentoring system.

- TOPS School overall was criticised by a number of rig personnel, including Supervisors, as failing to adequately prepare younger crew members for rig life, with too much theory and not enough practical skills in rigging and slinging, working at height, etc. It was felt that levels of hazard awareness were partially impacted by the lack of hands-on training within TOPS.

- Rig based hazard awareness training that is provided does not focus sufficiently on the workplace specific hazards and the appropriate controls, in particular for new generation rigs. People felt there was a need for specific training on the newer, automated drilling units which, for many crew members, introduce new system dynamics and the hazards that come with them.

- Extended well programmes inhibit individual exposure (experience) to various operations. This means that some crews will infrequently see certain operations. As a result, individuals do not have the opportunity to cross-train in other tasks and progression opportunities are limited. This lack of cross training, in particular, will result in competency silos and leave certain operations vulnerable to an increased level of risk if crew members move on.

Driver origin: **Corporate/Divisional.**

- There is a lack of awareness of the causes and effects of human error throughout the Division. People do, and will continue to, make genuine mistakes. Good training, mentoring, supervision, and experience backed up by robust systems can reduce the likelihood and consequence of these errors. People also, on occasion, commit wilful violations; they ignore barriers, exceed known limits, or side-step key safety controls in an activity. Organisations have to understand the difference and be equipped and competent to manage the risks presented by both situations.

Driver origin: **Corporate/Divisional/Rig.**

- The effectiveness of the buddy and mentoring system adopted on the rigs is heavily dependent on the competence, foresight, motivation and availability of the person fulfilling the mentoring role. This mentoring system should be more formalised and its application more controlled. Its effectiveness should also be formally monitored by a responsible person.

Driver origin: **Corporate.**

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Issue 2: Risk management processes (Planning and risk management)

Description

THINK is a key risk management and planning process on the rigs and is fundamental to identifying and controlling risk prior to undertaking a task in the workplace. Overwhelming feedback suggests that the workforce support the concepts of THINK, START, and TOFS as risk management tools. However, it was clear that there are a number of problems with the application of these tools which reduced their effectiveness. Hazard awareness has already been highlighted (see Issue 1) separately because of its criticality. Other implementation issues are listed below.

Repetitive and over complex process

Many felt the risk management process had become overcomplicated with too many steps and duplication. Their concerns included:

- Tasks often required more than one type of process to be followed, which resulted in a duplication of information on permits, isolation certificates, TSTPs and THINK Plans. This was perceived to be largely unnecessary and inefficient.

- A large proportion of the workforce feels that the THINK process is applied at too detailed a level for some tasks (e.g. using written THINK Plans for routine tasks with low risk levels).

- The length and complexity of some TSTPs leads to a concern that these will not always be applied properly. In addition, there is less than full buy-in to the content of some TSTPs, again potentially reducing their reliability/effectiveness as risk management tools. Updating TSTPs with finite levels of detail, as part of the after action review process has further compounded this issue. These areas of concern need to be resolved to provide clarity, consistency and a tighter linkage with the Operations Integrity Case (OIC).

- The issues are further compounded by the way that information contained in the (GSF) JRAs has been transferred into TSTP format. This has resulted in a huge number of TSTPs. People valued the content of the JRAs as 'task procedures', as sometimes there were no alternative Standard Operating Procedures (SOPs); therefore, there was resistance to reduce the number of TSTPs. Any efforts by leadership (Divisional and rig) to drastically reduce this number would be perceived by the workforce as a loss of safety critical information as a core guide in carrying out their tasks.

- Complexity and stated vagueness of requirements in the H&S Manual is seen to be confusing and leading to varied interpretation of what is actually required (see Issue 6: H&S Manual).

- There is a lack of consistency as to when the written THINK Plan is completed and applied. Some apply it during toolbox talks, some complete the THINK Plan afterwards, some leave only one person doing the THINK Plan without the involvement of the wider team.

Repetitive THINK Plans – dangers in blind application

The quality of THINK Plans that are produced for repetitive tasks (and there are many of these on the rigs) was questioned by numerous crew members based on their own experiences. People often noted that, when required to produce a THINK Plan for the same task on a regular basis, they stopped 'thinking' and just 'recalled' the necessary information to be written onto the THINK Plan. There is a risk that hazards will be missed, putting further reliance on supervision as one of the final control barriers.

Burden of paperwork

A common perception amongst Supervisors (and above) was that they deal with an excessive amount of administrative work that negatively impacts on time spent with their crews supervising, coaching, and mentoring. The source of office based paperwork includes: risk management process (written THINK Plans, updating TSTPs, documenting START cards and tours, etc), general rig administrative tasks

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(performance reporting, IADC reporting, GMS reporting, focus action management and close-out etc) and various types of data requests from the beach.

Use of risk assessment as a protection in the event of an incident

Some believe that THINK Plans are used to protect the organisation, rather than to identify and implement robust workplace risk controls. Individuals also create THINK Plans with a view to protecting themselves, should the content of the Plan be questioned later. This is influencing the effectiveness of the Plan because it is impacting:

- The quality of the Plan (it is carried out with additional agendas and, hence, becomes less focused on the real risks and controls in a task).

- The time to complete the Plan (dual agenda takes longer to manage).

- The time and effectiveness of communication of the Plan to the team.

The issues with the risk assessment processes listed above lead the review team to question the effectiveness and consistency with which risk assessments are carried out. This issue was supported by the data gathered from the perception survey, where 20% of the participants reported often seeing THINK Plans not being properly carried by others on the rig.

These issues influenced the 'Planning and Risk Management' assessor score which was 2.9 (Involving) and the 'Strategies, Policies and Procedures' score which was 2.7 for NAM Division. They also influenced the 'Training and Competence' score which was 2.6 overall.

Issue drivers

There are several drivers which contribute to this issue, and emerge from various levels of the organisation. They have been listed and explained in the paragraphs below.

CMS and SMS requirements of the risk management process

The risk management process' design is contributing to the issues described above. The risk management process complications can be broadly categorised into the following areas:

- The number of levels and various risk assessments which are used by the workforce.
- The number of steps that have to be followed.
- The length and number of forms to record the process.

The creation and implementation of successful risk assessments requires greater clarification of company expectations and simplified processes for recording.

Driver origin: **Corporate.**

Blame culture

The existence of a blame culture also impacts on the THINK planning process. THINK Plans designed to protect the author(s) are common, and detract from the value and quality of the critical controls they should identify and apply. Blame culture is described separately in the section Issue 8: Blame culture and trust.

Driver origin: **see Blame culture drivers.**

Leadership

The complexities and rationale for the different risk management tools can often have a sound basis (e.g. for tasks with higher risk levels, PTW brings greater coordination, communication, checks, and controls) but this needs to be made clear in training and mentoring, and safety meetings. Feedback has suggested that leadership have not clarified their expectations to enable consistent application of risk

management processes, including PTW and THINK. Rig leadership must further clarify their expectations and then consistently adhere to those expectations.

Driver origin: **Corporate/Divisional.**

Issue 3: START in application (Planning and risk management)

Description

The majority of the workforce believed that START was a good tool, in concept, and understood its purpose. Some crews saw it as a value adding tool which provided a foundation for recording daily conversations on critical safety issues. However, a significant number of crew members expressed concern over the application of START and believed that the system was being devalued. Their main concerns were:

- The policy of one START card per day from all the PoB.

- High number of made up cards being submitted into the system.

- High numbers of positive "atta boy" cards which do not offer any real learning opportunities.

- The majority of corrective action cards focus on low risk safety issues (e.g. trailing hand technique, untidy equipment state) and not on major hazards.

- START cards are not often used to log safety behaviour conversations which are taking place.

- The system creates a significant amount of paperwork which adds to the workloads of Supervisors and RSTCs, reducing time for mentoring and supervising.

- START card system is seen in a negative light and many crews still feel like they 'tell tales' on others instead of viewing it as a learning opportunity.

- Lack of feedback on submitted cards.

- The START card data used for monitoring assessments is seen as low quality, and is distorting rig specific safety issues and trends.

- Overall, there is a feeling that the system has become devalued and there is no sign of changes being made to correct this.

This issue influenced the 'Monitoring, Evaluation & Improvement' assessor score which was 2.7 (Involving) for the NAM Division.

Issue drivers

There are several drivers which contribute to this issue and these emerge from various levels of the organisation. They include:

'One a day' rule

It was clear from discussions that the START card process is perceived to be devalued by the 'one a day' policy. There was evidence that the process was stalling and failing to meet the intended objectives, with some undesired outcomes (i.e. made up cards, "atta boy" cards, easy fixes, etc). Hence, there was a need for an injection of fresh ideas, support and mentoring to get the process back on track, which may include a re-think on the 'one a day' rule. This must include addressing the quality of information contained within the cards, as opposed to the number of cards. Management was perceived to be blindly pushing 100% compliance for a system that is in need of change.

Driver origin: **Corporate/Divisional.**

Training and support

START system training was reported to be weighted heavily towards the process of filling in START cards. An important component of START is having a safety conversation where both parties feel like they have benefitted. This does not come naturally to all people. Some people will have the communication skills and personality to achieve this outcome, but many will require coaching to develop this (also see Issue 9: Leadership skills).

Driver origin: **Corporate/Divisional.**

Blame culture

Blame culture has also been covered separately in this report as part of this issues section. A proportion of crews see the START process as a negative reporting method (e.g. 'snitching on your buddy' or telling tales). Moreover, there is a preconception that this may bring negative consequences rather than be seen as a positive learning experience. Blame culture impacts on the way the workforce feel about this process and impacts the way in which they use it/do not use it.

Driver origin: **see Blame culture drivers.**

Issue 4: Learning organisation (Monitoring, evaluation and improvement)

Description

The majority of participants felt that START, TOFS, audits, near-hits and incident investigation were valuable sources of information to help prevent incidents from happening again, and to support performance monitoring. Although monitoring and evaluation are key risk management tools, there were issues about monitoring parameters, the accuracy of data being captured, its value and use as feedback for improvement. Observations made by crews and by the LR EMEA reviewers indicated that barriers (described below) will reduce the overall effectiveness and efficiency of feedback data. This will ultimately increase the risk of incidents and delay the achievement of performance objectives.

Barriers to reporting, investigation and follow-up

There was strong agreement in the value of information collected from investigations of near hits and incidents, and the analysis of that information in order to learn from events and improve safety and performance. There was, however, less agreement with the idea that all incidents were reported, investigated fully and fairly, and followed up with effective measures to reduce the likelihood of reoccurrence. One of the primary barriers to the free reporting of incidents was the widely held preconception that incidents are investigated to attribute blame. Such perceptions will inevitably result in under reporting.

Using START as a monitoring tool

The use of START as a monitoring tool was unstructured and not well understood. As an example, people viewed START tours as a means of surreptitiously checking up on the frontline workforce. The value of monitoring the 'one a day' START cards was also seen to be low. Made up cards, too many "atta boys" and easy pickings (e.g. unnamed person not using the trailing hand technique) all contributed to the devaluation of any trending or analysis that could be extracted from the process. START monitoring as applied to TOFS, THINK Plans, TSTPs, PTWs, isolations or safety meetings and communications was erratic and ineffective. The use of START as an observation process to understand behaviours, acts and omissions could be more effective. Examples of manual handling and PPE compliance were often cited, but the opportunity to monitor hazards relating to pinch points or materials handling (for example) were often missed or not recorded.

Poorly planned audits (including PMAAs)

On the DWH, as an example, there were an estimated 26 planned audits for 2010. Feedback suggested that many of these audits had similar scopes, or were seen to offer little or no value. While there was a clear understanding of the potential value to be gained, there was concern that the time taken to

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prepare, and process, corrective actions was reducing the time for other critical tasks such as mentoring, coaching and supervising. While carrying out audits is a key process in driving a strong safety climate, the successful application of safety activities is also essential, as is striking an appropriate balance between the two.

Issue drivers

There are several drivers which contribute to these issues:

Blame culture

Blame culture will affect performance, create silos, lower morale, reduce reporting and distort the risk picture, further reducing confidence in management. This has been discussed elsewhere (see Issue 8).

Driver origin: **Corporate/Divisional/Rig.**

Leadership plus monitoring

Monitoring processes provide leadership with opportunities to assess performance, progress, and change. NAM Division leadership could be more visibly pro-active in these key safety activities and share lessons learned from:

- START processes.
- Accident/incident investigations.
- MOC initiatives.
- THINK Plans.
- TOFS.
- Alerts and Quick Shares.
- Training.
- Inspections, audits and reviews.

Leadership must be seen to implement these monitoring activities in such a way as to extract the positive gains, together with improvement needs, in order to achieve credibility in the eyes of the workforce.

Driver origin: **Corporate/Divisional/Rig.**

Poorly focused performance monitoring programs

The daily monitoring process onboard the rigs focused on measuring the achievement of or compliance with:

- Perfect Days.
- START observations.
- START tours.
- TOFS.
- THINK Plans.
- Prompt cards.
- PTW audits, etc.

These activities almost entirely focused on compliance with policies or standards and gave little attention to quality, priority, and risk levels. The key to successful and value-adding monitoring is to "measure what you value" rather than a compliance culture of "value what you measure".

Driver origin: **Corporate/Divisional/Rig.**

Organisational competence in human factors

A greater level of awareness of human factors is essential, and competencies in this area should be enhanced, particularly at corporate and divisional level. Specifically, the concept of human failure and human error (covering both active and latent failures), and the idea of performance shaping factors (PSFs) that influence the likelihood of human error, needs greater awareness (e.g. fatigue, quality of

procedures, quality of training and awareness of hazards, quality of the human-equipment interface design etc). Human error is inevitable, but a systematic approach to its identification and management will be effective in reducing the likelihood and impact of critical errors. This competence is an essential component in a learning organisation's approach to risk management.

Driver origin: **Corporate/Divisional.**

Rig workload

Feedback indicated that the workload of the rig-based teams is increasing. More audits, change initiatives, requests for data, and compliance requirements are reducing the time available for critical activities including competence assurance, risk management processes and coaching/mentoring. Effective performance monitoring set against focused objectives would help the Division to define appropriate work schedules, a sound basis for measurement, and make priority-based decisions.

Driver origin: **Corporate/Divisional.**

Issue 5: 2-Way communication

Description

The cascade of safety critical information from senior management to the frontline workforce is a fundamental aspect of business management. The style, method and application of these communications and the feedback from the workplace are critical to the management of risk. The LR EMEA review identified a number of areas relating to communication and consultation which require the attention of the Divisional leaders. The issues included:

Initiative overload

Several of the crew mentioned that the number of safety communications and safety initiatives can be difficult to deal with (this issue is in a similar vein to the Management of Change issue). With every safety communication or initiative, in theory, there should be distribution and training/learning processes to ensure the people who require this knowledge have received it, understand it and can put it into practice. The rig-based workforce reported that the number and frequency of these communications were difficult to manage. The delivery and receipt of these communications forms the basis for shared learning and understanding. Too much information can be as dangerous as too little, and sometimes Supervisors struggle to decipher the safety critical/non-critical information they must deliver. The whole credibility of a safety message (and the person delivering it) can be tarnished by ineffective communication and the perceived value within the message (what's in it for me?).

Negative Association

The frontline workforce felt that the majority of communications from Corporate/Division level to rig level were negative in nature (i.e. as the result of an incident or poor safety performance). Although it is recognised that positive communications do occur, the feeling is that there is imbalance. This leads to an association of negativity between the rig and the beach.

There is recognition that there are great opportunities for learning and raising safety awareness but the issues listed above are preventing the full potential.

Consultation and involvement

The overwhelming feeling across the rigs was that changes were imposed from above with little or no consultation or involvement from the offshore workforce. People need to understand why changes are proposed and how this affects their work. Without consultation, there is a lack of buy-in, disenchantment, and a loss of credibility (aimed at the change itself and Transocean management) which cumulatively will affect safety performance. This is more fully discussed under Management of Change.

These issues influenced the 'Communication' assessor score which was 2.6 (Involving) for the NAM Division.

Issue drivers

There are several drivers contributing to this issue.

Organisation size

The size of the organisation plays a key role in the amount of safety information generated and in the way it is distributed or communicated. As there are a large number of rigs globally, inevitably there will be a number of learning opportunities which should be distributed to the rest of the Transocean organisation via QHSE communications, as well as volumes of safety data from Corporate and external sources. These need to be effectively managed prior to presentation to the rigs.

Driver origin: **Corporate/Divisional/Rig.**

Technological advances

As technology advances, it has become easier to communicate across the organisation between Corporate, Divisions and rigs. This increased ease of communication has brought more and more safety related, and other, information into the organisation. Again, there is the potential for information overload at rig level, which needs to be effectively managed.

Driver origin: **Corporate/Divisional/Rig.**

Communications protocol

As part of this review, the LR EMEA team has not reviewed Transocean's communications policy, with the exception of the requirements for safety communications outlined in the H&S manual. However, it is evident from the issues stated in this section that the following are not occurring as efficiently as they should be:

- Providing a clear prioritisation of the communications.

- Filtering of communications such that only relevant and necessary communications are directed to each rig.

- Adopting a strategy to retain knowledge of key safety communications.

- Recognising that the frontline Supervisors are often the most effective vehicle for cascading key information to the workforce.

- Understanding that people accept communication more readily if it takes place face-to-face.

- Recognising that people accept communication more readily when they understand "what's in it for me?"

Driver origin: **Divisional.**

Leadership communication styles

It has already been mentioned that the style, coupled with the tone of communication adopted by leaders, can impact how well it is received. On certain rigs, in particular, leadership styles were described as being autocratic, dogmatic, and not necessarily supportive. Non-supportive communication will undermine the achievement of a strong safety culture and the promise of shared values. See Issue 9: Leadership skills for further details.

Driver origin: **see Leadership skills drivers.**

Issue 6: H&S Policies and Procedures Manual (Strategies, policies and procedures)

Description

Lloyd's Register EMEA has already released a report covering the findings from a review of the content of the H&S Manual. The following list briefly summarises the key concerns perceived by the crews in the NAM Division, and the observations of the Lloyd's Register EMEA reviewers.

Although some Supervisor and management level employees found the content of the H&S Manual useful, they raised concerns with respect to its usability. It was evident that crews had the best intentions and wanted to be compliant with all that is required in the H&S Manual. However, they found this difficult to achieve and relied on additional support from the RSTC or their Supervisors. The key concerns were that the content of the document is:

- Unstructured and had no clear visual overview of the SMS, with its goals and aims.

- Hard to navigate.

- Not written with the end user in mind (language and tone).

- Written in an ambiguous way which makes it hard to determine correct implementation.

- Poor distinction between 'what' is required and 'how' this should be achieved.

- Updated frequently, or perceived to be, and hard to keep up with changes.

- Always added to and nothing taken away or consolidated.

- Difficult to access the latest version of the manual for crew members with no computer access.

As a result of these issues, a proportion of the workforce only referred to the H&S Manual occasionally and some crews were unknowingly consulting an out of date Manual.

This issue influenced the 'Strategies, Policies and Procedures' assessor score which was 2.7 (Involving) and the 'Management of Change' score, which was 2.2 for the North America division.

Issue drivers

The drivers for this issue are:

H&S Manual content and structure

The content and structure of the Manual is the main driver for this issue. The Lloyd's Register EMEA review team did not visit the Corporate office, therefore it would not be appropriate to speculate as to the reason why the content is written as it currently is.

The Manual would, however, benefit from being simplified and clarified in places and this has been highlighted in a separate report.

Driver origin: Corporate.

Management of Change

Management of change is covered separately (see Issue 7, below) as part of this issues section. Changes to the H&S Manual were seen to be frequent and poorly communicated. See Issue 7: Management of Change for further details.

Driver origin: see Management of Change drivers.

Interpretation of Company Mission Statements/CMS/SMS language

The messages cascaded down through the organisation are often misinterpreted by the workforce at rig level; these include:

- 'An incident-free workplace – all the time, everywhere' whilst acknowledged as an admirable goal is seen as unrealistic and unachievable with some crews. It is also interpreted as 'I cannot make a mistake' (or else I will be blamed and may lose my job).

- 'Zero tolerance' is interpreted as 'if I make a mistake, I'll be disciplined'.

- Lack of understanding of 'responsibility' and 'accountability'. Accountability is often associated with punishment. While people need to be held accountable, this needs to exist within a just culture.

NB: these are also discussed under Issue 8: Blame culture and trust.

Driver origin: **Corporate.**

Issue 7: Management of Change

Description

Many organisations face continuous change in order to meet their business objectives in a competitive market place. Successful change is therefore critical to business. An organisation's ability to embrace and facilitate change is paramount to safe and efficient operations. Poorly managed change will ultimately reduce performance and have a detrimental effect on safety. Feedback from participants during the review of NAM operations (both on and offshore) consistently suggested that Transocean has some Division-wide change management challenges, and that there is considerable scope for improvement. The LR EMEA final report will make detailed suggestions for continued improvement in this area.

Some examples of how different changes can impact on safety are:

- Engineering change (e.g. equipment or software): those who are not fully familiar with equipment may not have sufficient knowledge to complete an adequate THINK Plan and execute the task correctly.

- Procedural change (policies, processes and systems/software): modified procedures require 'unlearning' the old procedure and relearning the new, which increases the opportunity for errors. Also, if the new procedure is cumbersome and difficult to work with, it could increase the likelihood of deliberate violations and introduce additional hazards and risks.

- Organisational change (workforce and team structure): a change of a key rig role (such as the OIM) can temporarily remove the benefits which come from knowing your people. Communication can suffer as a result, which can bring additional safety risks in certain situations.

- Task change (e.g. team number, task objectives or environmental conditions change): a change in goal or conditions of a task being carried out that alters may not be fully accounted for by the controls put in place.

MoC was the lowest scoring area from the assessors' scores and was included amongst the lowest scoring areas within the perception survey. This finding is consistent with other divisional findings. The NAM interview data revealed a number of MoC issues related to inadequate planning, overly frequent change (including initiative overload), organisational change, procedural change, poor change communication, and a lack of follow-up support. Interviews also revealed that offshore crews were generally comfortable with the degree of MoC control associated with engineering change; in general, people understood the REA process and how it related to their specific role. Information obtained from

interviews onboard the DDII indicated that crews had attitudes that harboured greater tolerance and acceptance towards change.

Change management should be a structured process and Figure 9 below illustrates a typical cycle that applies to all aspects of change.

Figure 9. Change management cycle
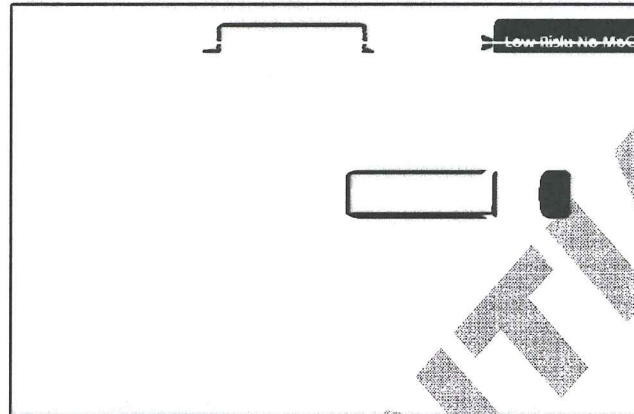
Change management requires structure. The change is initiated by many drivers (finance, safety, legislation, audit findings, new technology, etc.) and an initial risk assessment should determine the need (or not) for the MoC process. If the risk is determined to be low, a formal MoC process is not required. If health and safety, business, environmental, or community risk is identified, the MoC process must be applied. This requires resourcing and planning, with a communication and consultation process being established at an early stage. Risks are typically increased when the plan moves into the implementation phase. The initial phase is referred to as transition (one foot in the old/one in the new) and this phase can be protracted, and the source of confusion and frustration in the workplace. Only when the issues and risks of the transition phase are managed, can the implementation process progress towards consolidating the change. The key is to then fully promote the effectiveness and benefits of the change in order to achieve the full cooperation and buy-in required to sustain the change. Communication and consultation is critical to successful change and to create a culture of readiness for the next change initiative. Note that this model is not explicitly followed by Transocean; it is described here simply as an aid to explain issues.

Planning change

Generally, organisational, procedural and engineering changes are initiated at a Divisional or Corporate level. However, there is a strong feeling that many of these changes are not properly risk assessed and the full impact of the changes are not considered in an operational context, prior to implementation. It is a common perception offshore that many initiatives are introduced as knee-jerk reactions, with very little or poor planning by beach based personnel with a lack of (or even reported complete absence of) appreciation of the operational impacts of proposed changes. It is perceived that this lack of appreciation has needlessly introduced additional hazards and risks. For example, there were isolated reports during interviews of cases where it was perceived that commercial decisions were given a priority over safety. One example related to operational decisions to repeatedly defer the replacement of a 25 year old crane onboard the Marianas, which, it is believed, eventually underwent an overhaul instead. Crews from the Marianas cited another example where repair work in the immediate vicinity of the moonpool was planned and scheduled during dry-dock modifications, but deferred for commercial reasons and completed offshore. The rig-based workforce resented this decision, because it meant they had to erect scaffolding and carry out extended repair work over water within the moonpool. The rationale supporting this decision had not been fully explained, therefore it did not deter from the perception that this operational decision took precedence over the safety of the offshore crews.

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Frequency of changes

With every change an organisation goes through, there is a natural cycle of engagement which can be deemed a 'change curve'. Figure 10 illustrates this transition curve, with typical emotions that a workforce might experience. A key aim during the Management of Change is to recognise the potential negative impacts on morale and performance, at least initially, and to take steps to identify and manage these. These impacts should be considered when assessing the overall risks that the change may bring.

Some Human Factors specialists believe that this model is over pessimistic about the individuals' reactions to change. However, there is strong agreement that reactions of this type do reflect individuals' responses to major (personally influencing) change.

Figure 10. The transition curve

Adapted from the Kübler-Ross Model
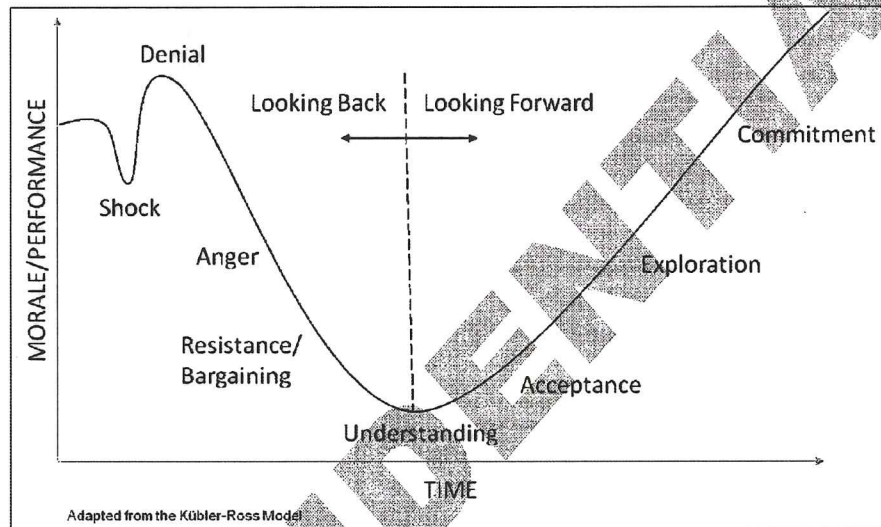
Frontline crew members report that they were exposed to numerous simultaneous changes that allowed little time to move through the transition curve and adjust to previous changes. Because of the frequency of change, many crew members often struggled to keep abreast of and remember change details. Priorities were seldom identified or set, and this further confused the workforce. Some of the typical areas where the workforce reported feeling that changes were too frequent and in quick succession included:

- Changes to policies and procedures within the H&S Manual and the CMS.

- Safety initiatives: often referred to as "Initiative Overload" (e.g. push poles, FR coveralls, 21/21 hitch change, etc).

- Work process support functions (e.g. new software packages designed for reporting, procurement or document management).

People not only struggled with the frequency of change, but also felt that changes often involved additions, as opposed to upgrades or replacements.

Communication and consultation

Communication and consultation is crucial to the success of any change process; firstly, to facilitate "buy-in" and understanding and, secondly, to verify that the proposed changes are suitable. Perception

survey results confirmed that over half (59.1%) of rig-based participants did not feel that they were informed of changes that affected them. Interviews confirmed the perception of a lack of change communication, including:

- There was a lack of an effective consultation process to enable the workforce to influence planned changes. Consultation with the rigs was rarely sought by Corporate or Divisional change instigators regarding the adequacy or appropriateness of change (hence, some changes were often seen as unworkable or the rigs were left to get on and deal with it). The 21/21 hitch change was often cited as an example where the rig-based crews would have appreciated playing a part in that decision-making process, or at least being able to gain a better understanding of the change drivers.

- Communication regarding change was often late or absent, resulting in inadequate preparations prior to change roll-out.

- Communications often neglected to explain the reasons for certain changes. This makes it very difficult for those at rig management level or supervisory level to 'sell' the change to their crews. If the workforce has insufficient information about the nature of the change, they, undoubtedly, will not see the need for change. People need to know 'what's in it for them' in order to gain acceptance. This was evident when they were required to wear lace-up boots, FR coveralls, and the 21/21 hitch change.

Implementation

Successful roll out of change requires planning, preparation and training to ensure the workforce are adequately prepared for the change, understand it and how it applies to their roles, with the ultimate goal of complying with the changes in order to achieve change objectives. Structured change roll-out will increase the rate and degree of efficiency as the change progresses through the transition curve. There were a number of concerns relating to the implementation of change, including:

- There is often a lack of a plan or programme of information to support the roll-out of the change. This leaves the workforce unsure of timescales, who they apply to, what resources are available, etc.

- Complex changes are perceived to be rolled out with a 'big bang' approach across the entire fleet. The workforce feels that changes of this nature could be introduced in a phased approach which would provide opportunity to fix application issues prior to a complete roll out. 'Big bang' is sometimes necessary as it is the only realistic way to implement some changes. This method, however, can be high risk if insufficient planning is undertaken prior to launching the change.

- People often felt that a lack of hazard awareness frequently impacted individuals' ability to call a TOFS in order to address a task change.

- Feedback suggested that adequate training was not provided as part of change roll-out. Examples cited included Push Pole training and training related to changes in software or IT system changes.

- Many former GSF crew members resented the replacement of JRAs with TSTPs because they felt that JRAs were better.

Follow-up support

Once a change has been introduced, there are a number of support activities that are required, including:

- Processes to address the impacts of change on other ancillary activities (e.g. emergency response plans, maintenance and inspection schedules, training and competency assurance, communications, supply chain management, etc.).

- Collection of performance data to measure the degree (i.e. where change has progressed to on the transition curve) and the effectiveness of the change. It is essential in order to put additional control measures in place to support crews as they adjust to implemented changes.

- Consultations with the workforce to discover any residual risk, knock-on effects, or concerns that have been created by the change.

- Further modification of any aspects of the change, as necessary.

- Identification of additional training requirements.

- Any ongoing specialist skills or experience support.

There was widespread concern amongst crews at rig level that these activities were not occurring on a consistent basis to support the various changes that they were being subjected to. Often, rig crews felt that they were left on their own to find a way to make the changes work on their rig. A frequently cited example of crews simply having to deal with beach based decisions included changes to RMS/GMS, and the introduction of long-sleeved FR coveralls and the 21 day hitch. The rigs had to respond to these changes using their own devices. Some real concerns emerged relating to the 21 day hitch, which was compounded by the introduction of FR coveralls under conditions with high heat and humidity. The rigs increased their own levels of monitoring and frontline supervision because of concerns of fatigue and exhaustion amongst the workforce.

This issue was partially supported by the data from the perception survey. Whilst 95.6% of the workforce felt that they participated in the changes to working practices that affect them, only 59.1% felt that they were informed about changes.

This issue influenced the 'Management of Change' assessor score which was 2.2 (Managing) for the North America division, and the lowest score overall.

Issue drivers

Many organisations struggle with change management because change is constant and manifests itself in many ways. Organisational changes, such as frequent changes in Rig Managers, the GSF merger, the use of contractors, changes to H&S policies and procedures, and changes to roles and responsibilities, are usually not understood, planned and implemented as effectively as engineering change. The high frequency of change makes it difficult to deal with varying degrees and demands of change. The drivers for these change management challenges could be rooted in many areas, but the most likely basic causes for these problems will be:

- The lack of systematic processes that are flexible to the nature and complexity of the change.

- A lack of a wider understanding/awareness of change management implications, including the risks associated with the change.

Change management processes

Transocean applies a combination of START and TOFS processes to manage change. This approach is perfectly suitable for task based change, but leaves significant scope for inconsistencies and omissions when applied to other, more complex change requirements. Transocean's existing systems create confusion when applied to procedural and organisational change, and people in senior positions in the organisation struggle to explain both policies and procedures relating to more complex change management; this is not so evident with engineering change. A new systematic approach to the Management of Change is needed within Transocean. The LR EMEA final Recommendations Report will make detailed suggestions for improvement.

Please note that this issue has also been raised as part of the findings from the CMS and SMS review.

Driver origin: **Corporate.**

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Change implications on hazard awareness and decision-making

The hazard awareness MoC drivers emerge in two areas: task change management and the decision making process.

Low levels of hazard awareness will clearly have implications on individuals' confidence in calling a TOFS, ultimately impacting the effectiveness of task change management. Hazard awareness has been raised as a separate issue, with a number of drivers, including: risk perception, competency management and training. See Issue 1: Hazard awareness for more details.

Decision-makers, in particular, need to understand the implications of their decisions as part of the change management process. A lack of this change management understanding was evident (and criticised) in some of the commercial decisions that deferred essential maintenance activities.

Driver origin: Corporate/Divisional.

Issue 8: Blame culture and trust

Description

Worryingly, a significant proportion (43.6%) of the personnel participating in the perception survey reported that they worked with a fear of reprisal if an incident or near hit occurred. This issue is strongly related to the investigation process, which nearly 40% of the participants believed was applied to apportion blame (NB: for the same question, none of the Divisional office felt that this was the case). Furthermore, interviews revealed that this reported fear of reprisal was often associated with potential dropped object incidents. Although high levels of trust were reported at rig level, there was a significant level of reported mistrust between the rigs and the beach.

This perceived blame culture and the associated trust issues have knock-on effects for safety management. The list of items below summarises behavioural issues raised to, and witnessed by, the LR team associated with this issue:

- The existence of a sense of fear is itself stressful; it affects the perceptions, decisions, motivations and actions of people. Importantly, it can make people and organisations less effective; a learning organisation and blame culture do not fit well together.

- The THINK process, whilst being a risk assessment process, also becomes an exercise to protect individuals (CYA) in the event of an incident. When this process is used for a dual purpose such as this, the effectiveness of its primary function (i.e. to control task risk) can be reduced. A good example of this is crews attempting to list every hazard on the THINK Plan which has been subject to discussion at safety meetings (even though the hazard is not related to that task). This deflects attention away from the primary risk hazards that should be addressed as part of the THINK process.

- Incident reporting can be affected as crews are concerned that the response to honest reporting may result in reprisal to them or their colleagues. This also reduces learning opportunities and can distort safety statistics.

- There were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. There were perceptions on certain rigs that, depending on the relationship with the rig leadership team, individuals were treated differently. This largely related to the outcomes of incidents and near-hit investigations. These feelings of inequality are likely to have a negative impact on workforce motivation, in particular those who feel sidelined or threatened. This propagates mistrust and will erode attempts to create an inclusive safety culture.

- Distrust in beach based management may create additional barriers which have to be overcome in the change process, due to scepticism at rig level. People may feel more unwilling to accept change, and the champions that drive and support change at rig level could be harder to identify and less effective, as a result.

- In an organisation where a blame culture exists, communications are liable to become distorted and distrusted. The two way flow of information becomes difficult, as people become guarded about the information they receive or disclose, and the positive influence that people can impart in their day-to-day work is degraded.

- Accountability is an essential component of a Safety Management System and a good safety culture. People are empowered by this and gain a sense of responsibility for themselves and others. However, many people in the Transocean organisation equate accountability with blame and liability – if a mistake is made then you are accountable and will pay the price; possibly by being run off.

This issue influenced the 'Trust' assessor score which was 2.9 (Involving) for the NAM Division overall. Certain rigs reported a less pronounced blame culture than others, with DWH and DDII scoring slightly better, as the fear of reprisals related more specifically to dropped objects only, and not more widely, as was the case on DCL and the Marianas.

Issue drivers

There are several common drivers which contribute to this issue. These drivers emerge from differing levels of the organisation and they have been listed and explained in the paragraphs below.

Incident Investigation Process

A view expressed on a number of occasions was that, although TOP-SET was seen as a systematic process to determine the cause of accidents, many saw it as an opportunity to apportion individual blame. The reason why the investigation process is viewed in this way is thought to be due to:

- The definition and understanding of human error. If an incident is directly attributable to human error, the performance shaping factors or root causes in the system are said not be adequately considered (e.g. adequacy of training, fatigue, procedure design etc.) and the conclusion of the investigation effectively stops at the individual.

- The perception that admission of error was more likely to lead to punishment than support and further training, design modifications, etc. (despite the Performance Improvement Initiative).

- There were reports of isolated instances where crew members had been disciplined without any obvious just cause (i.e. disciplined for a genuine, first time, error). The reasons for this have not been captured as part of this review but there have been reports and admissions of this occurring in the past. The repercussions of this have the ability to, and usually do, spread across the rig where the incident took place, and possibly other rigs, as frontline crews discuss the incident and outcome with co-workers.

- Poor communication of the rationale behind findings and actions taken. Where discipline, or even dismissal, is the result of an investigation, crews are not always adequately informed of the reasons which led to this decision. Additionally, there have been several reports that the tone of the beach to rig communication during an investigation often portrays a message that someone is being sought to apportion blame. This issue has close associations with Leadership (see Issue 9).

Driver origin: **Corporate/Divisional.**

Application of the discipline/improvement process

Rig crews that have knowledge of the individual and the situation which surrounded the incident sometimes view disciplinary actions as unjust and/or inappropriate.

Driver origin: **Divisional/Rig.**

Interpretation of Company Mission Statements/CMS/SMS language

The messages cascaded down the organisation are often misinterpreted by the workforce at rig level which exacerbates the perception of a blame culture, these include:

- 'An incident-free workplace – all the time, everywhere' whilst acknowledged as an admirable goal, is seen as unrealistic and unachievable with some crews. It is also interpreted as 'I cannot make a mistake' (or else I will be blamed and may lose my job).

- 'Zero tolerance' is interpreted as 'if I make a mistake, I'll be disciplined'.

- Lack of understanding of 'responsibility' and 'accountability'. Accountability is often associated with punishment. While people need to be held accountable, this needs to exist within a just culture.

Driver origin: **Corporate**.

Issue 9: Leadership skills

Description

Leadership competencies are currently based predominantly on technical criteria associated with the knowledge and skills requirements. Leadership skills are essential in the creation of an inclusive safety culture.

A training matrix is maintained for each crew member, which consists of a series of beach based training courses and rig based OJT modules. As personnel move up the organisation to Supervisor level and above, there are no defined criteria, measures or training associated with the leadership skills required for people and process management, particularly the non-techincal skills. Some examples of leadership skill categories have been listed below:

- Motivation skills.

- Communication skills.

- Coaching/mentoring.

- Team building.

- Conflict resolution.

- Resource management.

It has been reported that these elements are considered in an informal manner when considering candidates for promotion. However, this process is subjective and can be more prone to inconsistencies. There was no evidence to suggest that these elements were adequately factored into the recruitment or succession planning processes, competency management processes or training and development programmes.

These skills are important in the implementation of safety management processes. It is important to ensure that people who are being promoted and recruited from external sources have appropriate levels of skills and/or the leadership potential for the job they are required to do. The lack, or absence, of these skills can expose an organisation to additional leadership challenges. In the NAM Division, for example, there were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. This largely related to outcomes of incidents and near-hits, as well as promotions and career advancement. These feelings of inequality have the potential to negatively impact workforce motivation, in particular those who feel sidelined or threatened.

Additionally, the tolerance of substandard safety behaviours erodes levels of respect for leaders. For example, on one rig, the LR EMEA review team observed a number of the crew (including some members of the onboard rig leadership team) displaying an apathetic attitude towards a serious defect. On a rig with a strong safety culture, the first person to identify this would have reported it and held themselves accountable for ensuring the situation was safe.

Issue drivers

The drivers for this issue are:

Accountabilities for SMS effectiveness

Given that the competency of crews in hazard identification and awareness are so key to risk management on the rigs, and given the reported areas of weakness in this area, it would be prudent to look at the pattern of responsibilities and accountabilities across the organisation for the effective application of the SMS. If the SMS is not delivering an effective competence assurance system, then it would benefit the organisation to have someone who is made accountable for the overall design and effective application of the SMS generally. Currently, the SMS is inherited from Corporate, and the rigs must implement the requirements, with support from Division. However, no-one in Division is obviously accountable for the effectiveness of the SMS, or its application. Accountability is presented as a personal value in the Transocean CMS – "everyone is accountable". It is not clear if this global accountability principle is an effective means of ensuring specific management objectives are achieved to the required standard. Ensuring an effective SMS, and its effective and efficient application, is a key management objective and requirement. Its achievement requires that someone with the necessary level of authority is made accountable to make it happen, and is therefore specifically monitoring to assess the success with which this is occurring, and assessing any problems arising and possible changes that need to be made.

Competency criteria definition

There is no leadership skills definition or measurement criteria integrated into the competency management system. A process such as this would be beneficial when selecting staff for recruitment/promotion and identifying training requirements for staff moving up within the organisation. Leadership skills are currently considered informally, which leads to inconsistency and a higher likelihood of poor judgement cases.

Driver origin: **Corporate/Divisional**.

Training content

There are presently no specific training/mentoring programmes offered to develop non-technical leadership skills within the Transocean workforce. People have a certain amount of natural capability, dependent upon their personality and experience. Training and mentoring can help to capitalise and maximise an individual's capability in leadership skills such that they can progress to being better Supervisors and Managers.

Driver Origin: **Corporate/Divisional**.

Conclusion

This assessment has identified a number of strengths and weaknesses in the NAM Division, many of which are common across the Transocean organisation. The strengths listed in this report provide a good foundation that can be built upon to create improvements in the way safety is managed.

The perception data and key findings have been summarised in this report. Where applicable, data from the perception survey has been included in the 'Issues' section to demonstrate support or contradiction. A more in depth review of the data and statistical analysis has been included in the separate Statistics Report.

There were nine issues presented in this report. Many of these issues have common drivers and some issues act as drivers for others. Figure 11 shows a diagrammatic representation of the relationship between the issues. Where an issue acts as a driver to another issue, it has been represented via a connected arrow.

Figure 11. Issues relationship
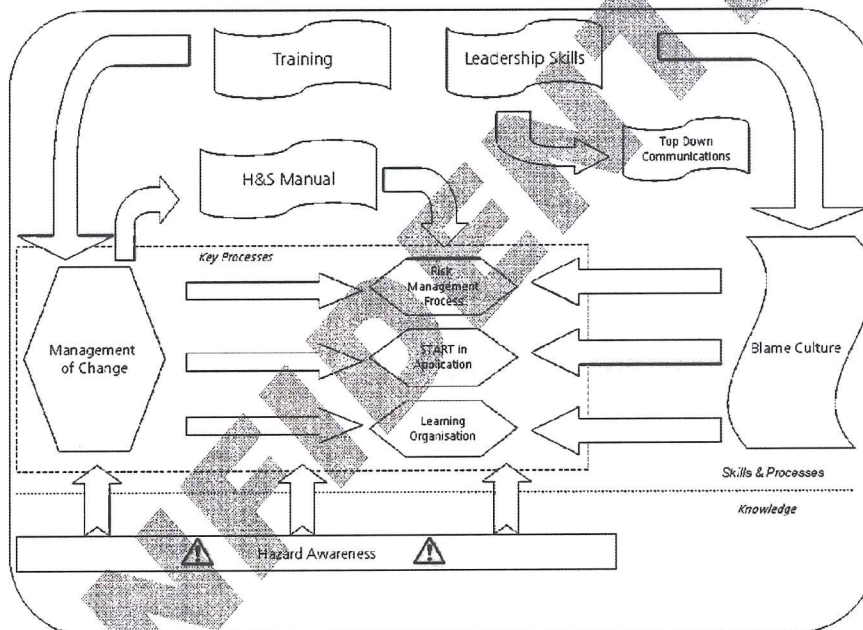
LR EMEA was engaged to support Transocean as a result of a series of serious accidents and near hits within the global organisation. Without doubt, all of these events (and others) were as a result of multiple causes and many contributory factors.

The findings of the North America review will reflect many of those issues and the Division will need to work with both the rigs and with Corporate if improvements are to be realised. Critical areas involving Leadership Skills, Blame Culture and Trust, Management of Change, 2-Way Communication, H&S Manual, the Risk Management processes (as well as START in application) and learning organisation will have to be addressed. However, underpinning all of these issues is a fundamental problem with the low levels of hazard awareness that were evident throughout the Division.

LR EMEA will issue a Company Recommendations Report which will detail suggestions for continued improvement that the North America Division should address.

Appendix A – Perception survey

Location / rig: _____   Date: _____

Safety Perception Assessment Scoring form

A. Role: _____

B. Employed By (tick one):	C. Function (tick one):	
	Off Shore	On shore
☐ Transocean	☐ Drilling	☐ Divisional
☐ Contractor (hired by Transocean)	☐ Marine	☐ Corporate
☐ Client Staff (Shell, BP, Chevron .etc)	☐ Maintenance/Subsea	
☐ Third Party (Client Contractor)	☐ Support Staff	

D. Do you line manage other staff?   ☐ Yes / ☐ No
Do you supervise other staff?   ☐ Yes / ☐ No

	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
1 I do **not** get all the information I need to do my job safely and keep myself and others safe.	☐	☐	☐	☐
2 I am encouraged to raise ideas and suggest safer ways to do things at work.	☐	☐	☐	☐
3 Management feels operational performance (e.g. drilling) is more important than my safety.	☐	☐	☐	☐
4 There are always enough people to carry out work safely	☐	☐	☐	☐
5 Some rules and procedures are difficult to understand and complicated, so I don't always follow them.	☐	☐	☐	☐
6 My line manager listens and acts on my safety concerns.	☐	☐	☐	☐
7 The sharing of lessons learnt from START, TOFS, audit, near hits and incident investigations helps me to prevent incidents from happening again.	☐	☐	☐	☐
8 I participate in the changes to working practices that affect me.	☐	☐	☐	☐
9 I am **not** always informed of the outcome of changes that affect me.	☐	☐	☐	☐
10 There are too many steps in place to manage risks.	☐	☐	☐	☐
11 Tasks are **not** always adequately planned before we start work.	☐	☐	☐	☐

Location / rig: _____   Date: _____

	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4
12 Because of the training and support I have received I fully understand the safety procedures and hazards associated with my job.	☐	☐	☐	☐
13 There are **not** sufficient resources (equipment & money) for me to carry out my job, identify and manage risks safely.	☐	☐	☐	☐
14 I do **not** have enough time to do my job according to rules & procedures.	☐	☐	☐	☑
15 I must demonstrate that I can do my job safely before I am considered to be competent.	☐	☑	☑	☐
16 Transocean rewards me when I carry out my work safely.	☐	☐	☐	☐
17 **Not** all incidents are reported, investigated and followed-up.	☑	☐	☐	☐
18 If my actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), I feel I could report this without any fear of reprisal.	☑	☐	☐	☐
19 I feel confident to take shortcuts when carrying out certain tasks.	☐	☐	☐	☐
20 I do **not** get to hear about, or participate in, safety improvement initiatives.	☐	☐	☐	☐
21 The purpose of incident investigations is to determine who is to blame and should be disciplined.	☐	☐	☐	☐
22 All the changes in the company i.e. mergers have **negatively** impacted our safety performance.	☐	☐	☐	☐

Rig specific questions

23 I often see THINK plan **not** being properly carried out by others on the rig.	☐	☐	☐	☐
24 Some of the workforce are uncomfortable with calling a TOFS when unsafe situations occur.	☐	☐	☐	☐
25 I often see unsafe behaviour on the rig.	☐	☐	☐	☐

Appendix B – Transocean Marianas summary report

Lloyd's Register

CONSULTING SERVICES
LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

Client:	Transocean
Project:	Safety Management and Safety Culture/Climate Reviews
Location:	North America Division
Asset:	Transocean Marianas
Date of assessment:	12th to 15th March 2010
Team:	4

Technical Report Document Page

Report No.	Report Date	Revision Date	Type of Report
ABN0991642/006.002	23 April 2010	25 May 2010	Issue

Title & Subtitle	Security classification of this report
Transocean Safety Management and Safety Culture/Climate Review – Transocean Marianas	Restricted to client and Lloyd's Register EMEA

Prepared	Checked
Kathryn Melia	Barnaby Annan
Signature	Signature

Authorised	
Nick Jackson	

Reporting Organisation Name & address	Reporting organisation reference(s)
Lloyd's Register EMEA Consulting Services Department Denburn House 25 Union Terrace Aberdeen, AB10 1NN	

Sponsoring organisation name & address	Sponsoring organisation reference(s)
Transocean	

Summary

Individual rig report relating to Lloyd's Register Safety Management, Safety Culture, Safety Climate Reviews of Transocean operations.

Key words	Distribution
	Divisional Managing Directors General Managers Adrian Rose (Houston)

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Report glossary

AD	Assistant Driller
BOP	Blow Out Preventer
BP	British Petroleum
CAKES	Comply, Authority, Knowledge, Experience, Skills
CMS	Company Management System
CP	Competent Person
CYA	Cover Your A**
DAFWC	Days Away from Work Case
FAC	First Aid Case
FOCUS	Formulate, Organise, Communicate, Undertake, Summarise
FR	Fire Retardant
GSF	GlobalSantaFe
H&S	Health and Safety
HSE	Health, Safety and Environmental
ICS	Inventory Control System
IT	Information Technology
JRA	Job Risk Assessment
JSA	Job Safety Assessment
LTI	Lost Time Incident
MoC	Management of Change
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OJT	On the Job Training
PA	Performing Authority
PMAA	Performance Monitoring, Audit & Assessment
POB	Persons on Board
PPE	Personal Protective Equipment
PTW	Permit to Work
RMP	Rig Manager Performance
RMS	Rig Maintenance System
RSTC	Rig Safety Training Coordinator
RSTT	Rig Safety Training Technician/Trainee
SLF	Safety Leadership Foundation
SLT	Safety Leadership Training
SMS	Safety Management System
START	See, Think, Act, Reinforce, Track
THINK Plans	The Company Planning Process
TOFS	Time Out for Safety
TOPS School	Pre-rig Orientation Training
TRA	Task Risk Assessment
TRIR	Total Recordable Incident Rate
TSTP	Task Specific THINK Procedure

Appendix glossary

COM	2-Way Communication (internal and external)
EMP	Employee Influence
LEA	Leadership
PRM	Planning and Risk Assessment
RIG	Rig Specific Questions
RRR	Resources, Roles and Responsibilities
SPP	Strategies, Policies and Procedures
TRA	H&S Training and Competence
TRU	Trust (blame – just culture)

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Date: 25 May 2010
Prepared by: Kathryn Melia   Lloyd's Register EMEA

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Executive summary

Introduction

On the 12th to the 15th of March 2010, a team from Lloyd's Register EMEA (Paul Harrison, Kathryn Melia and Barnaby Annan) visited the Transocean drilling rig, Marianas, to conduct a review of the company Safety Management System, safety culture and safety climate.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the Safety Management System (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

Summary of results

The results of the maturity assessment and perception survey are summarised below and include:

1. Classification of industry recognised Safety Management System elements against maturity index criteria.

2. Key strengths and weaknesses identified.

3. Key findings from the perception survey.

1. Classification of Management System elements against maturity index criteria

Table 1 below summarises the reviewers' ratings of the safety culture on board the rig. The reviewers' ratings are a reflection of the interviewees' views of the organisation; these were then averaged to give the initial assessor rating. The five point maturity scale has the following categories:

1. Emerging (lowest category).

2. Managing.

3. Involving.

4. Cooperating.

5. Continuously improving (highest category).

Table 1. Maturity ratings

Element	Rating	Classification
Resources, roles and responsibilities.	3.2	Involving
H&S training and competence.	2.4	Managing
Planning and risk assessment.	2.9	Involving
Management of change.	1.9	Managing
Strategies, policies and procedures.	2.9	Involving
Leadership.	2.9	Involving
2-Way communications (internal and external).	2.5	Involving
Employee influence.	2.6	Involving
Monitoring, evaluation and improvement (learning culture).	2.9	Involving
Trust (blame – just culture).	2.4	Managing

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The data is also presented in the form of a spider chart (see Figure 1 below).

Figure 1. Spider chart of maturity categories
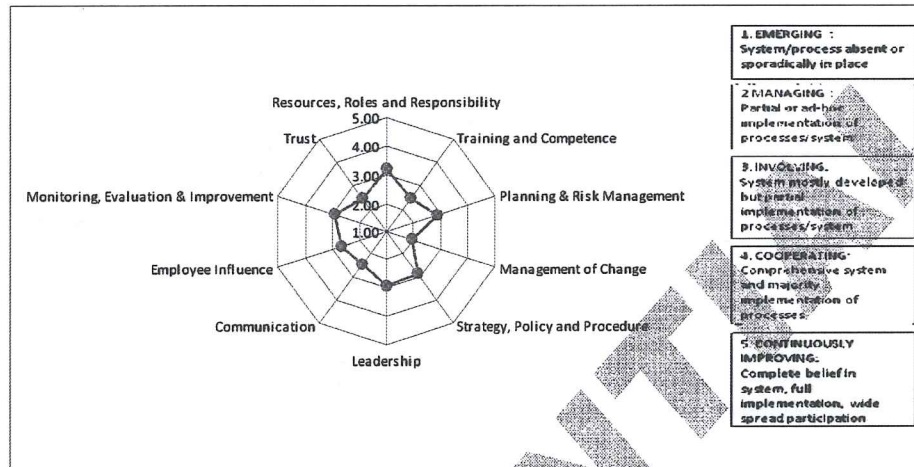
2. Key strengths and weaknesses

The review process identified a number of key strengths and some areas of weakness on the Marianas, which are described below.

It was evident that there was a strong commitment to safety on this rig and a belief that Transocean was committed to protecting all those on board.

Regarding roles and responsibilities for safety, there was a clear feeling and recognition of both an individual/personal responsibility for safety, and of a collective responsibility that the whole crew had to work together to achieve safety. Regarding available resources, there was a strong belief that there were enough people to carry out work safely, that there was enough equipment and financial resources to manage risks, and that there was enough time to do work safely. These results indicate that, at least at a surface level, the majority of personnel did not feel resourcing was a weakness with regard to safety. (There were, however, some questions around the retention of skilled personnel, competency levels of some personnel, and of processes in place for competence development. There was also a complaint that the crane, which is very old, has not been replaced, despite repeated requests).

Despite a number of changes in rig leadership in the past few years, there was clear evidence of strong rig leadership (the current OIM and senior Supervisors were highly praised by participants); the OIM was highly accessible and visible around the rig, and respect for senior Supervisors was also borne out in the observations of Supervisors' meetings and pre-tour meetings, where respect and discipline came across strongly.

Regarding strategies, policies and procedures for risk management, there was a strong awareness of the need to follow rules and procedures and of the danger in taking shortcuts. Rig management, responding to a feeling that the SMS was not particularly accessible/was difficult to read, had promoted the "14 Key Expectations" for safety management. Senior rig management also used a strategy of asking personnel at pre-tour meetings for their commitment to go out and "work safe" (which was given).

There were high levels of intra and inter-team communication on the rig. Communications were strong up to OIM level and down to shop floor, with an approachable style being shown at senior

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Supervisor level. Safety information and any safety concerns were widely discussed and there were a number of both formal and informal mechanisms to allow this.

In relation to planning and risk management, personnel showed a good understanding of, and valued the ideas and concepts behind, the risk management tools THINK and START. However, the manner in which they are implemented and used is viewed as problematic. The application of written THINK Plans to simple routine tasks is believed to be undermining the value of the plans. This is perceived to be caused by the crews "pencil whipping" the plans because they do not recognise them as a communication and planning tool in the context of such seemingly simple, low risk tasks.

The one a day START card mandatory target is perceived to be undermining the value of the START system. Participants recognised that START was an important safety tool, and is an opportunity for the rig and Transocean to learn from behavioural observations, but the majority of START cards are positive "atta boys" or job monitoring type, which appear to deliver minimal learning in comparison to the number of cards submitted. The hazard identification competence development likely to be occurring from such cards is perceived to be low.

The areas that exhibited the most concern in relation to safety were, training and competence, management of change, and trust.

One of the greatest perceived challenges faced by the Marianas is the ability of some personnel to identify hazards, especially those arising when task conditions change from what they were assumed to be during the planning process (using THINK). A number of participants in the review noted the following key challenges in the management of safety:

- Poor hazard identification skills generally.

- Uncertainty regarding when to use written THINK Plans as opposed to individual/verbal THINK Plans or Prompt cards.

- The inability of some personnel to identify when tasks and task conditions changed (and hence recognise new hazards and risks requiring attention as part of the START process).

Regarding levels of trust on the rig, there was strong evidence of a blame culture existing onboard the Marianas. The perception of a significant number of interviewees is that the incident investigation teams always seek to blame an individual, as opposed to trying to identify whether any system faults contributed to the incident and determine the real root causes. A number of interviewees noted that they would be concerned for their job if they were to make a mistake. Consequently, there was anecdotal evidence that personnel are hesitant to report incidents.

3. Key findings from the perception survey

The analysis of the participant perception survey data identified a number of strengths and weaknesses that mirror the findings of the reviewers, in particular:

- The majority of respondents (72.2%) felt that they always had enough people to carry out tasks safely. This was borne out by the findings from the interviews, with very few participants indicating that they felt the Marianas was under resourced. However, it should be noted that retention of skilled personnel was raised as a concern.

- 63% of respondents indicated that they believed there were too many steps in place to manage risks. To some extent, this is probably a reflection of the volume of paperwork associated with planning tasks. This was a common theme in the interviews, although it should be noted that 77.8% felt that tasks were properly planned before they were carried out.

- 50% of respondents felt that personnel were not comfortable calling a TOFS. This reflects the conclusions drawn from the interviews, and comments made by interviewees that there is reluctance amongst some of the junior, less experienced crew members to call a TOFS. Although, it should be noted that the more senior members of crew are engaging in the

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process and holding safety conversations (although not necessarily recording it via the START card process).

- 87% of respondents believe that the training provided by Transocean helps them understand the safety procedures and hazards associated with the tasks they are expected to carry out. It should be noted, however, that hazard identification competency amongst new/more junior personnel was raised as a concern by a significant number of personnel during the interview process.

- One of the key areas of concern highlighted by the respondents to the survey is that 61.1% felt that, if their actions led to a potentially risky situation e.g. dropped object, they do not feel that they could report it without fear of reprisal. This was supported by the findings from the interviews which highlighted a significant blame culture on the rig, stemming from the incident investigation process. The perception is that the process is designed to identify an individual to blame. A significant number reported being concerned for their job.

Figure 2. Perception survey results for the Transocean Marianas represented as a bar chart
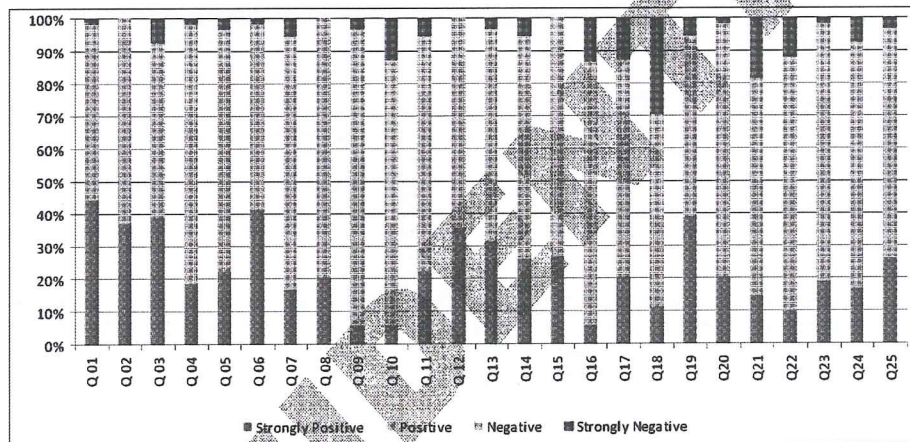
A table of the questions and crew responses survey data can be found in Appendix 1 to this report. Further analysis of the Transocean Marianas survey data will be undertaken when it is incorporated into the North American dataset.

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Introduction

On the 12th to the 15th of March 2010, a team from Lloyd's Register EMEA (Paul Harrison, Kathryn Melia and Barnaby Annan) visited the Transocean drilling rig, Marianas, to conduct a review of the company Safety Management System, safety culture and safety climate.

Rig background

Type: Semi-submersible.
POB: 133.
Client: ENI.
Other: the Marianas was engaged in normal drilling operations, although the day prior to the LR EMEA review team's arrival, an incident occurred on a supply boat serving the Marianas, which resulted in a serious injury to a member of the boat crew. He was treated by the Marianas Medic and remained onboard for a period of time until the weather cleared, enabling the Coastguard to medivac him to shore.

Before being sold to Transocean, refitted for drilling operations, and moved to the Gulf of Mexico as a MODU (where it was renamed "Marianas"), this large semi-sub used to operate in the UK North Sea as a fire fighting, construction, diving support, hospital and accommodation vessel. The vessel, called "Tharos", supported the fire fighting operations on the night of the Piper Alpha disaster in 1988.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the system (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

The offshore review concluded with a close-out meeting on board the rig which summarised the review findings without detailed scrutiny of the data produced. This close-out was followed by a further close-out meeting in Division, again without reference to detailed data. Detailed analysis of review data will be developed and included in the final report.

Methodology and criteria

The assessment was carried out using a series of interviews, focus groups and site/activity observations where implementation of the Management System was assessed using the Lloyd's Register maturity index. This was explained at the opening meeting on board the rig where the assessment scope, criteria and programme was confirmed, confidentiality assured and the reporting mechanism explained.

Areas selected for an appraisal of the climate and maturity of the Safety Management System and its implementation are listed below:

- Resources, roles and responsibilities.
- H&S training and competence.
- Planning and risk assessment.
- Management of change.
- Strategies, policies and procedures.
- Leadership.
- 2-Way communications (internal and external).
- Employee influence.
- Monitoring, evaluation and improvement (learning culture).
- Trust (blame – just culture).

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Personnel, operational areas and processes sampled

Focus groups and interviews carried out over the assessment period are listed as follows:

- Numbers assessed = 55.
- Percentage of POB = 43%.
- 5 formal interviews of rig/regional team members.
- 12 focus groups involving a total of 50 people.

Operational areas and processes sampled during the review are summarised as follows:

- Drilling.
- Maintenance.
- Electrical.
- Subsea.
- Marine.
- Transocean contractors (catering).
- Client third party.

Meetings and discussions:

- Daily meetings (pre-tour and morning meeting with company man).
- START tour (focusing in and around the sack store).
- Informal observation of operational activities (e.g. drilling activities, crane lifting operations).
- Observation and participation of emergency response drill (both from within the control room and as participants in the drill itself).

Documentation and processes:

- THINK Plans.
- START cards.

Please note that this report refers to various categories of rig based workforce who were interviewed as part of the review process. They included:

- Management (OIMs, Senior Toolpushers etc.).
- Supervisors (maintenance, drillers, RSTCs etc.).
- Front line crews.
- Third party contractors (Transocean and client).

Presentation of rig specific results

Output from the assessment processes is presented in the assessment tables below:

Element reviewed: Resources, roles and responsibilities	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Overall, 72.2% of the workforce agreed they always had enough people to carry out the work safely. 88.9% also felt they had enough equipment and financial resources to manage risks. Likewise, 79.6% of the workforce felt they had enough time to do their jobs safely. These results indicate that, at a surface level, the majority of personnel did not feel resourcing was a weakness with regard to safety.

Assessment output/evaluation:

All of the personnel who participated in the LR EMEA review appeared to understand their roles and responsibilities with regard to safety management. It was evident that Supervisors were aware of the importance of ensuring that their crews use the safety tools available to them.

Roles and responsibilities were understood, and there was a clear feeling and recognition of both an individual/personal responsibility for safety, and of a collective responsibility that they all had to work together to achieve safety.

Regarding resources available, there was a strong belief that there were enough people to carry out work safely, that there was enough equipment and financial resources to manage risks, and that there was enough time to do work safely. These results indicate that, at least at a surface level, the majority of personnel did not feel resourcing was a weakness with regard to safety.

Retention of experienced personnel was raised as a concern by a number of interviewees who stated that Transocean does not pay as well as other drilling companies and, as a consequence, they are losing experienced personnel to competitors. This has the potential to impact mentoring and supervision of inexperienced personnel.

Concerns were raised by a number of interviewees about the selection process for new rig floor personnel. The perception is that the HR Department in the Divisional office does not understand the skills required to do the tasks offshore and, consequently, are hiring inappropriate personnel. New hires are expected to go through TOPS School, but concerns were raised that it still leaves new hires unprepared for rig life and lacking a suitable level of hazard awareness.

Concerns were raised in relation to equipment as a resource. The Marianas is an old rig and, as such, getting suitable spare parts, maintaining equipment and getting new equipment was perceived as problematic by a number of interviewees. A number of examples were given of equipment requiring to be replaced, most notably one of the cranes which is 25 years old. The budget to replace the crane is thought to have been in place on several occasions but, since the maintenance team have been able keep the crane running, it was reported that the money has apparently been reallocated to other projects. Consequently, the crews have to work with a crane that they perceive to be inherently more unsafe due to its age.

The purchasing process was a source of concern for a number of interviewees involved in making requests for new equipment and supplies. It was noted that the purchasing approval process can take a significant period of time, and is unnecessarily bureaucratic. On occasion, purchase requests have been cancelled without explanation. Once approved, it can be a lengthy process to get parts offshore. It reportedly took one week to get critical drugs out to the Medic.

Strengths:

- Personnel demonstrated an adequate understanding of their roles, responsibilities and accountabilities with regard to the use of THINK and START (especially Prompt cards).
- Strong feeling of personal responsibility for safety.
- Strong belief that resourcing is adequate for safety.

Weaknesses:
- Loss of experienced personnel.   - New hire selection process – inappropriate personnel being selected.   - Replacement of ageing equipment.   - Purchasing process.   - Actual application of THINK and START was inconsistent.   - START card quality and lessons learned were not strong enough to support hazard awareness competence development.   **Significant comments that illustrate these findings:** *"This rig is getting $550,000 per day, unless it's a sink that needs fixing it isn't getting fixed … going nowhere to be fixed. They won't send the rig to the shipyard for the major refurb that is required in certain areas."* *"The rig needs a new crane; it is as old as the rig. A new crane has been repeatedly budgeted for, but the money keeps being reassigned elsewhere because the beach sees the guys being able to repeatedly patch it up to keep it running, but this is not an efficient way of doing things."* *"Some of theses kids don't even know how to mop and sweep when they come out here."*

Element reviewed: Training and competence	
Method of review: Focus groups and individual interviews.	**Review category:** Managing
Perception data:	
Results from the perception survey suggested that 87% of participants felt the training and support they had received gave them a full understanding of safety procedures and the hazards associated with their tasks. Similarly, participants felt that they had to demonstrate they could do their jobs safely before being considered competent (92.5%).	
Assessment output/evaluation:	
A training matrix is in place for Marianas personnel and contractors which outlines the training courses applicable to the various disciplines on the rig. Visitors and personnel new to the rig receive a basic induction summarising responsibilities relating to participation in the START process, the colours process, THINK Plans, Prompt cards and a tour of the rig. An "On-the–Job" (OJT) training programme is implemented on the Marianas and the modules cover elements of the SMS, including Permit to Work, THINK, START etc. Mentoring is a key process for competence development and risk management, but no formal process exists to ensure that personnel are receiving the appropriate quality and quantity of mentoring. Where mentoring exists, it appears to be of variable quality and very much dependent on the individuals involved ensuring that both parties benefit from the process. Non-mandatory training courses are available, and it is up to the individual to identify which they would like to undertake, and obtain the necessary approval. Training appears to target technical knowledge, with little available on the softer skills side (e.g. leadership, communications etc.). Also, there is evidence that competence in softer skills is not adequately factored into promotions. A number of personnel felt that the promotions process was not rigorous enough, with promotions being obtained on the basis of completion of training as opposed to combination of completion of training, time served in position and demonstration of competency. The perception of the majority of participants was that Transocean provides a significant volume of training, to the extent that personnel often attend a training course at the end of most of their hitches in order to complete the requirements of their training matrix. Concerns were raised about this in relation to the fact that Transocean no longer financially supports partners/families flying/driving to meet the crew and staying in the hotel with them whilst they attend the training. A number commented	

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that, if Transocean expects personnel to attend a significant number of training courses, often for a week at a time on their field breaks (which reduces the time spent with their families), then the financial support should be reinstated.

TOPS School for new starts was reported by a proportion of interviewees to have a number of weaknesses. TOPS School is designed as an eleven day course to prepare new starts for rig life. However, the perception on the rig is that, whilst it is useful in so far as it covers the H&S Manual and some of the tools, it is not adequately preparing personnel for the rigours of offshore life. It is perceived as inadequate in terms of giving new starts a basic understanding of the hazards they will face as deckhands/floor crew.

An observation made in the sack room, while on the rig, showed a lack of understanding by the operator performing sack duties of the use of correct PPE (see observation data); this may indicate a lack of training and/or supervision of such activities, as well as poor support to operators for PPE provision, maintenance and cleaning.

Strengths:

- Technical competency requirements have been established for all roles on the rig. Personnel are required to meet minimum requirements before proceeding to the next level.
- A training matrix is in place for basic and mandatory (legally) required training.
- Transocean supports requests for non-mandatory training when an acceptable case can be made for attendance.

Weaknesses:

- Individual training plans based around risk based training needs are not developed on an annual basis (the only training needs identified are those in the technical competence role matrix).
- Training only considers technical knowledge – there is not a systematic process to train personnel in the softer skills (e.g. leadership, communications etc.), measure performance and factor softer skills competence into promotions.
- Hazard identification, risk understanding and management of change during a task is not sufficiently emphasised or assured prior to working on the rig.
- A formal process does not exist to ensure that personnel receive appropriate mentoring. Where mentoring exists, it is of variable quality and very much dependent on the individuals involved ensuring that both parties benefit from the process.
- A number of personnel felt that the promotions process was not rigorous enough, with promotions being obtained on the basis of completion of training as opposed to combination of completion of training, time served in position and demonstration of competency.
- Inadequacies in TOPS School curriculum.
- Lack of understanding of the use of correct PPE during sack operations (see observation data).

Significant comments that illustrate these findings:

"Buddy process is only as good as your mentor."

"Promoting too fast means experience of Supervisors is not there. This affects hazard ID and passing on (mentoring) of knowledge."

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Element reviewed: Planning and risk management	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Results of the perception data showed that 77.8% of the same participants felt tasks were always adequately planned before work was started. 63% of the workforce felt that there were too many steps in place to manage risks, while 24.5% of the participants reported often seeing THINK Plans not being properly carried out by others on the rig. 24.1% of those surveyed felt they often witnessed unsafe behaviours on the rig.

Assessment output/evaluation:

THINK, START and TOFS were perceived as good controls in principle, although a significant proportion of interviewees noted that aspects of how they are implemented detracts from the usefulness of the tools, e.g. the START one a day requirement, the focus on written THINK Plans for routine simple, every day tasks.

Interviewees noted that there are issues with THINK Plan implementation:

- The allocation of THINK levels (when to apply each level to a certain task).

- High levels of paperwork associated with THINK, all of which detracts from the positive aspects of the tool (i.e. identification of steps in the task, responsible persons, hazards and controls).

A significant majority of interviewees indicated that they liked the introduction of the Prompt cards. They generally view the cards as a useful aide memoire. However, a number of personnel reported that the Prompt cards were good evidence of an individual THINK Plan in the event of an incident occurring.

One issue raised by a significant number of interviewees was the volume of paperwork required to be completed before undertaking a task. The perception is that, for routine tasks, a written THINK Plan should be unnecessary, in so far as people used the Prompt cards. The value of the paperwork seems to have been lost, resulting in a number of interviewees commenting that the purpose of the paperwork is to enable Transocean to cover themselves against lawsuits in the event that someone has an accident. Senior Supervisors and frontline personnel report that the amount of time available for mentoring is significantly affected by the level of paperwork being produced.

The volume of paperwork required is perceived to be detracting from time available for crews to carry out Toolbox Talks and communication of the work plan, prior to commencing work tasks. The focus is on getting the paperwork completed and authorised/signed off as quickly as possible, rather than communication amongst the work crew.

Personnel perception of the credibility of the START card system has been undermined by the insistence of the "one a day" card submission. A significant number of interviewees agreed that, whilst there is value in the system in so far as it forces people to review THINK Plans, identify when tasks change and identify unsafe acts and conditions, it is perceived as a 'numbers game', resulting in personnel making cards up, getting "easy catches", "pencil whipping cards" and playing the system. The perception is that very little learning is associated with the START cards currently because of the trivial nature of hazards identified and use of the cards as "atta boy" or task monitoring exercises, which do not require people to have a safety conversation.

Personnel reported that they had not received any training on how to have effective safety conversations or appropriate communication styles in order for everyone involved to get the most out of the START process.

Whilst the START system has been undermined, it should be noted that a significant majority of interviewees indicated that safety conversations are taking place, but they are disconnected from the START card process (i.e. they will stop a colleague who is placing himself in danger and point it out) but such conversations do not get recorded via the START cards.

Planning for hazard identification competency of new starts was raised as a concern by a number of interviewees. The perception is that the TOPS School is not preparing personnel adequately enough for working on the rig floor. Hazard competency weaknesses, less mentoring time available for senior Supervisors to mentor and pass on their experience, combined with the loss of experienced personnel to competitor drilling companies is potentially creating a situation where rig floor personnel are exposed to

unnecessarily risky situations. Heavy reliance is put on the frontline Supervisors to monitor the safety of their crews, which was noted as problematic when some crews have a high percentage of new starts/orange hats compared to experienced hands.

Strengths:

- Personnel believe and see the benefit of the THINK, START and TOFS processes as concepts.
- Prompt cards are viewed as a useful tool for personnel engaged in solo tasks, and as useful evidence of having completed an individual THINK Plan.
- Safety conversations are taking place (although they are not recorded, as is the intention of the START process).

Significant comments that illustrate these findings:

"(THINK is) good too for non-routine tasks."

"(THINK is a) good idea but not used effectively by everybody."

"(THINK is) very beneficial for non-routine tasks."

"We step back and talk but I don't think it's called like it's taught (i.e. use the phrase time out) ... but we do it."

Weaknesses:

- The volume of documentation required to be completed is, at times, viewed as burdensome.
- The volume of paperwork is impacting upon the ability of senior Rig Supervisors to get on the rig floor and mentor and supervise crews.
- Paperwork is detracting from time available for Toolbox Talks.
- Lack of credibility of the START system regarding the one card per day rule.

Significant comments that illustrate these findings:

"In my heart, we have to look at hazard ID ... it's the only way to teach people about the risk."

"Some people have no perception of what can hurt them."

"When you have to write a novel before starting the job, you have pretty much forgotten the job by then."

"So much to do to keep safe ... write novels to do a ten minute job."

"I want to drill a hole and keep people safe, not to run the operation like it's a Fortune 500 company."

"So focused on the paperwork that you don't look around you."

START: "mandatory target – failure gets you fired."

"Out of my 21 days, 6 START cards are preventative, the rest are 'atta boys'."

"They took a good tool and screwed it up."

"Most people are pencil whipping them."

"Quantity goes up but quality goes down."

"I can't be out there 100% of the time because of the paperwork."

"I'm lucky if I get 25% of my time on deck, rather than the required 50%."

"Getting more programmes thrown at us but they still want us out on deck."

Element reviewed: Management of change	
Method of review: Focus groups and individual interviews.	**Review category:** Managing

Perception data:

94.4% of the workforce who took part in the perception survey felt that they participated in the changes to working practices that affect them. A lower proportion of the workforce (57.4%) felt that they were always informed about changes that affect them. Also, 52% of the workforce felt that the merger had not impacted negatively on safety performance.

50% of the people surveyed felt the workforce were not uncomfortable calling a TOFS when unsafe situations occurred.

Assessment output/evaluation:

A significant number of interviewees indicated that change (with the exception of task/activity level change) is not handled well and communication relating to the changes is poor. The perception is that the rationale behind changes is rarely, if ever, explained.

The perception of a significant number of the interviewees was that the initiatives sent to the rigs from Corporate or the beach often reflects knee-jerk reactions to incidents and, as such, the implications of the changes have not been thoroughly thought through (e.g. introduction of push poles). The objective of the push poles is to go hands free on lifting. However, a number of personnel noted that they introduce additional risks, depending on how they are handled relative to the deck, stairs and body positioning.

It was also noted that training or suitable guidance associated with changes is often not specified by the beach/Corporate and is left to the rig to determine training or coaching that is required (e.g. no support given for training in the use of the push poles).

Participants noted that they were rarely consulted on changes and, as such, felt that many changes were imposed without due consideration for how it affects them e.g. switch from 14/14 to hitch patterns of 21/21.

There was a perception that the H&S Manual changed frequently, and that inconsistencies in application were driven by vague content. When changes are made, the communication to inform personnel of the change, and the reasoning behind it, is often poorly carried out.

It was noted that there are too many initiatives. More and more keep being added without anything being taken away. On occasion, they can be unclear and lack clear priority.

Engineering change at both rig level and changes requiring beach support were viewed in comparatively positive terms, compared to non-engineering changes. The perception is that a relatively clear process exists, and engineering change is handled much better than other types of change, e.g. hitch change.

Strengths:

- Personnel are aware of the requirement to use TOFS to stop a job when something changes which affects safety or how the task is carried out (although the perception data suggests this may not be happening).
- A clear process exists for engineering change review and approval.

Weaknesses:

- Communication and consultation in relation to change is perceived to be poor.
- Perception that change is often a knee-jerk reaction to an event.
- Lack of support for training associated with changes/initiatives.
- Too many initiatives.

Significant comments that illustrate these findings:

"There should be much more follow through before they implement the next change."

"Most of the things upper management do are reactive ... acts of desperation."

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> *"Keep adding more and more … but honestly is it improving the situation?"*
>
> *"Job justification in the office."*
>
> *"We get flooded … need to stop right now. We have so many tools to work with that are taking us away from the floor."*

Element reviewed: Strategies, policies and procedures	
Method of review: Focus groups and individual interviews.	**Review category:** Involving

Perception data:

14.8% of participants believed some rules and procedures were difficult to understand and complicated, so they did not always follow them. Also, 88.9% of participants believed that they would not feel confident taking shortcuts when carrying out tasks. This shows that personnel recognise the value of following rules and procedures, and the risk involved in taking shortcuts. However, 11% of personnel felt that they might take shortcuts, and nearly 15% reported that they might not always comply with the rules and procedures; this represents a significant potential risk.

Assessment output/evaluation:

The language of the H&S Manual is perceived to be inaccessible, legalistic and complicated, which makes it hard to apply in a practical setting. The perception is that the Manual has not been written with the end user in mind, grows with each initiative, and is inconsistent in places.

The rig follows the "14 Key Expectations" (a distilled list of the fundamental expectations from the CMS and SMS, used widely in NAM, and an attempt to summarise requirements in a more meaningful way for rig based personnel).

Rig management promoted the 14 Key Expectations for safety management recognising the general feeling that the SMS was not particularly accessible, and confusing. For example, concerns were raised over content and practical application of the Manual in relation to two part versus four part shackles (the Manual appears to ban the use of two part shackles. Beach support had to be sought to clarify whether it was an outright ban or whether two part shackles could still be used for single lifts).

Senior rig management used a strategy of asking personnel at the end of their pre-tour meetings for a verbal commitment that they would go out and "work safe".

The switch to 21/21 shift pattern was highlighted as a concern in terms of fatigue and concentration levels towards the end of the 21 days offshore.

The vision of an incident free workplace all the time, everywhere, was viewed as unachievable by a significant number of interviewees. The perception is that it is unrealistic, due to the nature of the oil industry, the equipment they have to work with and the quality of new recruits who lack good hazard awareness.

Strengths:

- Strong evidence of the value in following rules and procedures.
- Strong evidence of the need to follow risk management strategies and "work safe".
- Distillation of the Corporate objectives down into 14 Key Expectations – used on the rig to provide a clearer set of expectations for rig personnel.

Weaknesses:

- Changes to the HSE/SMS Manual are perceived to be too frequent.
- H&S Manual content is inaccessible in parts.
- H&S Manual is not written with the end user in mind.
- Transocean vision of an incident free workplace is perceived as unachievable.

Significant comments that illustrate these findings:

> *"(I) don't know whether I am following the policy or not because they change so often."*

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> *"It is designed by a load of college people who don't know about operations."*
>
> *"Written for the courtroom, not the oilfield."*
>
> *"Too many variances on what you can and can't do on different rigs because of different interpretation by OIMs."*
>
> *"I know they like us to make that commitment but it's not achievable."*
>
> *"Safety vision is unachievable ... you'll have accidents as it's just the nature of the job."*

Element reviewed: Leadership

Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

13% of the workforce who took part in the survey felt that management put operational performance (e.g. drilling) before their safety. 50% of the workforce believes that Transocean rewards them when they carry out their work safely.

Assessment output/evaluation:

Leadership at rig level was praised. The OIMs are perceived as setting clear expectations, are consistent in their leadership and visibly champion the Transocean safety tools.

The level of bureaucracy associated with running the rig, planning tasks etc. was noted as impacting upon the amount of time both the OIMs and senior Supervisors spend out on deck. Interviewees highlighted the amount of time the leadership teams spend at their computers, as opposed to being outside mentoring and supervising.

A significant number of interviewees had a rather more negative perception of the beach based management teams (apart from Rig Manager level). This is driven by the perception that they lack an appreciation of what it takes to run a rig, and consequently initiatives that are passed down are not workable: they make demands on rig personnel's time to find information/complete spreadsheets that they could do themselves; are hiring inappropriate personnel; seek to blame an individual if an incident occurs rather then truly get to the bottom of what happened (e.g. identify whether anything Transocean did or had in place contributed to the incident); and impose change without consultation and communication (e.g. switch to 21/21 hitch pattern).

It was also noted that a significant number of interactions between the rig and beach (above Rig Manager) can be negative in tone.

None of the participants indicated that inappropriate pressure was placed on personnel to complete tasks by cutting corners i.e. safety is given priority over production.

A significant number of interviewees raised concerns about the manner in which the accountability process was applied to Supervisors in so far as a number of examples were related whereby the Supervisors were fired for not being at the location of an incident (i.e. were elsewhere at the time, either dealing with paperwork or monitoring other tasks). The perception is that the immediate Supervisor will always be held accountable, regardless of what happened.

Strengths:

- Visible rig based leadership.
- OIM's and senior Supervisors lead by example.
- A number of personnel believe that Transocean's commitment to safety is class leading.

Significant comments that illustrate these findings:

> *"Transocean is the industry leader in safety."*
>
> *"Transocean is very repetitive on safety in a good way; they send out a constant message."*

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Weaknesses:

- Lack of trust in beach management team (above Rig Manager level).
- Paperwork involved in running the rig and planning tasks is impacting upon the amount of time the OIMs and senior Supervisors spend out on deck.
- There is a perception that Supervisors are often wrongly held accountable for incidents.

Significant comments that illustrate these findings:

"(I) have concerns whether they (the beach) really know what goes on out here. This impacts their ability to make decisions and design systems for use out here."

"If you see people from the beach out here ... go in the other direction ... it's bad."

"Chances are, if I meet management, there's been an incident."

"On one rig visit, the opening line to the meeting was sit down and shut up. Literally just like that. They didn't want to hear anything we had to say."

"Negativity is the wrong way to go about it ... it doesn't achieve anything."

"Everything that comes out of their mouths is negative."

"They preach accountability to us, but when there is an accident, the Supervisor is always to blame ... when does the accountability of the person who shouldn't have been in the place that got them hurt come into it."

"Too much accountability is on the Supervisors."

Element reviewed: 2-Way communication	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Perception survey results on aspects of communication were positive, with only 9.3% believing they did not get all the information they needed to do their jobs safely and keep themselves and others safe. 7.5% of those interviewed felt their line manager did not listen and act on their safety concerns.

Assessment output/evaluation:

Communication on the rig between crews and departments, both vertically and horizontally, was reported as good, and this was evident during the rig visit. The senior supervisory personnel had a very open door policy and there appeared to be a very tight knit community onboard that freely shared safety information, concerns and ideas.

There was clear evidence that communications from the beach are perceived as predominantly top down. Interviewees gave numerous examples of initiatives handed down from the beach without consultation with the rig e.g. change in hitch pattern, and change in overalls and work boots.

Perception that the level of non-essential communications sent to the rig by the beach based support teams is unmanageable, and prevents the OIM and senior Supervisors being able to spend sufficient time with their teams (coaching, mentoring and supervising). The perception is that many of the requests could be dealt with on the beach because they have access to the same information, and requests can be duplicated between departments because beach based support does not communicate effectively with one another to coordinate requests to the rig.

Strengths:

- Good levels of communication on the rig, both upwards and downwards.
- Open door policy at senior Supervisor level.
- Strong formal and informal mechanisms for communications.

Weaknesses:

- Excessive non-essential requests for information made of the senior rig management team by the beach.

Significant comments that illustrate these findings:

"I've got equipment down out here and they (the beach) want spreadsheets."

"They have all the same information in Houston but they still ask us to do stuff for them."

"I don't answer them (communications from the beach). I delete them. They ask time and again."

"Toolpushers get the worst ... asked twenty different times in two weeks for the same information."

Element reviewed: Employee influence	
Method of review: Focus groups and individual interviews.	**Review category:** Involving

Perception data:

94.4% of the participants surveyed felt that they were encouraged to raise ideas and suggest safer ways to do things at work, and 79.6% felt they got to hear about or participate in safety improvement initiatives.

Assessment output/evaluation:

Approximately half of participants indicated that they would call a TOFS and, when they do, they feel supported by the OIMs and Supervisors. However, it was noted that some of the junior frontline personnel may be reluctant to engage in this process because of lack of confidence and lack of hazard awareness.

All personnel participate in the START process, though the level of learning coming from this process is questionable.

Safety concerns can be raised via the START process and via the OIMs and Supervisors. However, it must be noted that the effectiveness of this process is being affected by a perceived blame culture during the incident investigation process.

A significant number of participants do not feel involved in the management of change process in so far as change is often imposed on them without consultation, proper communication or explanation of rationale for changes.

Communication is perceived as primarily top down. Very few participants reported examples of receiving feedback when they raise concerns via the START card process, and there is a perception that there are limited opportunities (particularly for frontline crews) to pass information back up the chain with any hope of influencing decision making.

Strengths:

- People do apply the TOFS process.
- Nearly 100% participation in START. However, this has only been achieved via the perception of the consequences for failing to participate in the system i.e. dismissal.

Weaknesses:

- Communication primarily perceived as top down, reports of little feedback being given to personnel when they raise issues or concerns.
- Perception of limited opportunity for personnel (particularly frontline crews) to influence decision making.
- Some junior crew members may be reluctant to call a TOFS on a "senior" colleague.

Significant comments that illustrate these findings:

"I think our voices are heard but I think at rig level, but this is as far as it goes."

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> *"It's like trying to get Congress to pass the Health Bill ... the organisation is so big that it takes so long to get anything done that, by the time it's approved, we've forgotten."*

Element reviewed: Monitoring, evaluation and improvement (learning culture)	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Results from the perception survey show that the majority of participants felt that START, TOFS, audits, near hits and incident investigations helped them to prevent incidents from happening again (79.6%). There was less agreement (63%) with the idea that all incidents were reported, investigated and followed up.

Assessment output/evaluation:

There was a divide amongst the interviewees in relation to whether they thought all incidents were reported. A number thought that every incident is reported, but a significant proportion reported that, in their view, this was unlikely to be the case. The lack of reporting is thought to be driven by the poor perception of the incident investigation process. It was variously described as a process by which Transocean sought to blame people rather than try to get to the root cause of incidents. Examples were given of outcomes being decided (in their opinion) before the evidence had even been gathered.

The perception was that the incident investigation process rarely went beyond establishing human error as a cause, to then identifying performance shaping factors in the system (system failures) that contributed to the error being made. The person is blamed and the learnings on system inadequacies are not realised. It was also noted that the level of investigation is perceived as not always being proportionate to the seriousness of the incident and, on occasion, it is viewed as excessive compared to what actually took place.

There appears to be little evidence that the outcomes of the investigations are used to learn lessons and implement improvements, with a number of interviewees commenting that the same incidents happen time and again.

START cards are monitored. They are reviewed daily by the Supervisors in each department. The START tracking appears more targeted at monitoring that everyone is complying with the one a day requirement than identifying opportunities for improvement, either in the process or the outputs.

Strengths:
- START card monitoring is effectively managed on the rig.

Weaknesses:
- Not all incidents would be reported.
- Application of the incident investigation process is perceived to be unfair and targeted at blaming individuals.
- On occasion, the level of incident investigation is perceived to be out of proportion with the seriousness of the incident under review.

Significant comments that illustrate these findings:

"People are scared to report (incidents)."

"You're supposed to report it but they blow the small things out of proportion."

"That piece of paper (THINK) will take your job ... they use that piece of paper against you."

"When something happens, the first thing they ask for is your THINK Plan."

"All the paperwork is geared towards protecting the company from lawsuits."

"Too much of your mind is concentrating on 'what if I do something wrong?', rather than worrying about the task."

"Treat you like a criminal."

"Went five years clear on this rig but how many broken bones did we have in that time? ... Swept under the carpet."

"Regardless of what I said, it was going to be wrong."

"They had already made their decision. They didn't want to hear anything I had to say."

"The process is about 'how did you screw up and violate policy?'"

"(Incident investigation interview process) what did you do, how did you do it and why did you do it?"

Element reviewed: Trust (blame – just culture)	
Method of review: Focus groups and individual interviews.	Review category: Managing

Perception data:

Results from the perception survey indicated that 60.1% felt that, if their actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), they felt they could not report this without any fear of reprisal. Similarly, 50% of those interviewed felt the purpose of incident investigations was to determine who is to blame and should be disciplined.

Assessment output/evaluation:

There is a very high level of trust and team working amongst the rig crew. People care for their own safety and the safety of their colleagues.

There is distrust between the rig and the beach office (above Rig Manager level). The majority of interactions appear to be tainted with suspicion of ulterior motives. Significant contributors to this lack of trust are:

- Dissatisfaction in the way the 14/14 to 21/21 hitch change was dealt with.

- Perception of the incident investigation process – almost 40% of participants feared that reporting an incident would lead to reprisals, and 50% believed that the purpose of the investigation process was to apportion blame.

- Poor communication and feedback.

- Perception that the personnel on the beach do not have a good working knowledge of rig operations to make appropriate decisions and take appropriate actions.

Further damage to trust has arisen due to the conduct of the incident investigation process, with numerous reports of a perceived blame culture. The view and expectation is that investigation leads to blame, which leads to disciplinary action. This invariably results in dismissal, causing some concern over whether to report incidents or hide them for fear of losing their jobs.

There is a fairly widely held belief that Transocean is trying to cover itself from legal liability through the paperwork. The perception is that any deficiencies identified in the paperwork in the aftermath of an event will be used as a reason to avoid liability and apply blame.

A widely held perception is that, whilst human error is seen as the cause of incidents, systemic failures that cause human error are not acknowledged and hence the likelihood of a recurrence is high.

Strengths:
- There is a strong level of trust within individual work teams.

Weaknesses:
- Blame culture.
- Fear of dismissal if they hurt themselves.
- Lack of trust between rig personnel and the beach.

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Significant comments that illustrate these findings:

"They are threatening to fire us for dropped tools."

"You don't know hitch to hitch if you have a job."

"Never an immediate threat in the past of being fired, but now there is an immediate threat if you are involved in an incident."

"I worry about who they will run off next."

"Transocean has gone termination happy."

"The first thing I think about when I get hurt is 'am I going to have a job tomorrow?'"

"Everyone walks around on eggshells."

"Pitting people against one another."

"Always watching your back."

"This blame culture takes your mind off the job."

"Every time I come here (to the rig) it feels like I am fighting for my life."

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Observation data

The purpose of this section is to summarise the LR EMEA review team's observations in relation to the meetings attended and activities observed over the duration of the visit to Marianas.

The team attended a number of meetings over the four day visit. Overall, the meetings were conducted in a professional manner and, where appropriate, followed a standard format.

Observation summary
Pre-tour meeting   *Strengths:*   • Purpose of meeting clear.   • Relevant personnel present, prepared for meeting and fully attentive (almost military like atmosphere!).   • Good levels of discussion, participation, and sense of team.   • General tone of the meeting was appropriate and received high levels of attention.   • Safety came across as a high priority – commitment was given by all at the end of the meeting to the OIM, to "work safely".   • Contribution from all personnel attending facilitated by the Senior Toolpusher and selected personnel to discuss START cards received from the previous tour, outline tasks and the day's work ahead.   *Weaknesses:*   • START card reviews from the previous day were read out, but it was felt that these had few learnings and little impact e.g. no tips were included on how to complete better START cards.   • Acoustics in the room were poor and it was quite hard to hear people speak at times due to ambient noise levels (despite everyone being quiet and straining to hear) e.g. management at the back were hard to hear at the front.
Supervisors' meeting   *Strengths:*   • Purpose of the meeting clear.   • All senior Supervisors present and fully attentive.   • Good levels of discussion, participation, and sense of team.   • General tone of the meeting was appropriate.   • Safety came across as a high priority.   • Contribution from all personnel attending, facilitated by the OIM.   *Weaknesses:*   • None.
START tour (in and around the sack room)   • Member of personnel loading sacks of mud into the hopper was wearing incorrect PPE (wrong type of mask).   • The member of personnel tried to change his PPE for a cartridge type respirator but was found to still have the incorrect cartridges for the hazards listed on the MSDS. Also, no apron was worn.

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- Face mask being used was very dirty.
- MSDS sheets were not easily accessed, were in an old file and were not easily visible adjacent to the sacks.
- Poor sack storage and organisation.
- Poor PPE cabinet design and maintenance.
- One pair of new goggles had been placed in the PPE cabinet but, otherwise, the respirators and cartridges were lying randomly, looked dirty and were hard to identify.
- The Derrickman was apparently directly responsible for the correct use of PPE for his personnel.
- The RSTC was responsible for stocking the PPE cabinet.
- The training on use, cleaning, storage and maintenance of PPE seemed poor, and the design and layout did not support ease of use of PPE, from selection, donning, storage and cleaning.

Recommendations identified by the team included:

- Review PPE cabinet policy – the same cabinets are used across different rigs and do not support ease of storage and use for multiple persons. The shelf is narrow and does not allow much to be stored; ease of identification of items is poor. The cabinet is more suited for hanging large items such as aprons and face shields, but not for multiple cartridges of different types.
- Review roles and responsibilities.
- Review MSDS availability and ease of use.
- Improve Management System programme for PPE.
- Implement training on PPE care, storage, cleaning and replacement.
- Raise awareness of the importance of PPE.

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Appendix 1 – Perception survey results

Table 2. Perception survey results for the Transocean Marianas

Q #	Questions		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I do **not** get all the information I need to do my job safely and keep myself and others safe.	COM		46.3%	7.4%	
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		5.6%	57.4%	
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA		48.1%	5.6%	
4	There are always enough people to carry out work safely.	RRR		25.9%	53.7%	
5	Some rules and procedures are difficult to understand and complicated, so I don't always follow them.	SPP		63.0%	11.1%	
6	My line manager listens and acts on my safety concerns.	COM		5.7%	50.9%	
7	The sharing of lessons learnt from START, TOFS, audit, near hits and incident investigations helps me to prevent incidents from happening again.	MON		14.8%	63.0%	
8	I participate in the changes to working practices that affect me.	MoC		5.6%	74.1%	
9	I am **not** always informed of the outcome of changes that affect me.	MoC		51.9%	38.9%	
10	There are too many steps in place to manage risks.	PRM		31.5%	50.0%	
11	Tasks are **not** always adequately planned before we start work.	PRM		55.6%	16.7%	
12	Because of the training and support I have received I fully understand the safety procedures and hazards associated with my job.	TRA		13.0%	51.9%	
13	There are **not** sufficient resources (equipment & money) for me to carry out my job, identify and manage risks safely.	RRR		57.4%	7.4%	
14	I do **not** have enough time to do my job according to rules & procedures.	RRR		53.7%	14.8%	
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		7.5%	66.0%	
16	Transocean rewards me when I carry out my work safely.	LEA		36.5%	44.2%	
17	**Not** all incidents are reported, investigated and followed-up.	MON		42.6%	24.1%	
18	If my actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), I feel I could report this without any fear of reprisal.	TRU		31.5%	27.8%	
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP		50.0%	5.6%	
20	I do **not** get to hear about, or participate in, safety improvement initiatives.	EMP		59.3%	18.5%	
21	The purpose of incident investigations is to determine who is to blame and should be disciplined.	TRU		35.2%	31.5%	
22	All the changes in the company i.e. mergers have **negatively** impacted our safety performance.	MoC		38.0%	40.0%	
Rig specific questions						
23	I often see THINK plan **not** being properly carried out by others on the rig.			56.6%	22.6%	
24	Some of the workforce are uncomfortable with calling a TOFS when unsafe situations occur.			33.3%	42.6%	
25	I often see unsafe behaviour on the rig.			50.0%	20.4%	

RRR   Resources, roles and responsibilities

TRA   H&S training and competence

PRM   Planning and risk assessment

MoC   Management of change

SPP   Strategies, policies and procedures

LEA   Leadership

COM   2-Way communication (internal and external)

EMP   Employee influence

TRU   Trust (blame – just culture)

RIG   Rig specific questions

TRU   Trust (blame – just culture)

Positive

Negative

Appendix C – Deepwater Horizon summary report

Lloyd's Register

CONSULTING SERVICES
LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

Client:	Transocean
Project:	Safety Management and Safety Culture/Climate Reviews
Location:	North America Division
Asset:	Deepwater Horizon
Date of assessment:	12th to 16th March 2010
Team:	2

Technical Report Document Page

Report No.	Report Date	Revision Date	Type of Report
ABN0991642/006.001	11 May 2010		Issue

Title & Subtitle	Security classification of this report
Transocean Safety Management and Safety Culture/Climate Review – Deepwater Horizon	Restricted to client and Lloyd's Register EMEA

Prepared	Checked
Garry Moon	Amy Annand
Signature	Signature

Authorised	
Nick Jackson	

Reporting Organisation Name & address	Reporting organisation reference(s)
Lloyd's Register EMEA Consulting Services Department Denburn House 25 Union Terrace Aberdeen, AB10 1NN	

Sponsoring organisation name & address	Sponsoring organisation reference(s)
Transocean	

Summary
Individual rig report relating to Lloyd's Register Safety Management, Safety Culture, Safety Climate Reviews of Transocean operations.

Key words	Distribution
	Divisional Managing Directors General Managers Adrian Rose (Houston)

Report glossary

AD	Assistant Driller
BOP	Blow Out Preventer
BP	British Petroleum
CAKES	Comply, Authority, Knowledge, Experience, Skills
CMS	Company Management System
CP	Competent Person
CYA	Cover Your A**
DAFWC	Days Away from Work Case
FAC	First Aid Case
FOCUS	Formulate, Organise, Communicate, Undertake, Summarise
FR	Fire Retardant
GSF	GlobalSantaFe
H&S	Health and Safety
HSE	Health, Safety and Environmental
ICS	Inventory Control System
IT	Information Technology
JSA	Job Safety Analysis
LTI	Lost Time Incident
MoC	Management of Change
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OJT	On the Job Training
PA	Performing Authority
PMAA	Performance Monitoring, Audit & Assessment
POB	Persons on Board
PPE	Personal Protective Equipment
PTW	Permit to Work
RMP	Rig Manager Performance
RMS	Rig Maintenance System
RSTC	Rig Safety Training Coordinator
RSTT	Rig Safety Training Technician/Trainee
SLF	Safety Leadership Foundation
SLT	Safety Leadership Training
SMS	Safety Management System
START	See, Think, Act, Reinforce, Track
THINK Plans	The Company Planning Process
TOFS	Time Out for Safety
TOPS School	Pre-rig Orientation Training
TRA	Task Risk Assessment
TRIR	Total Recordable Incident Rate
TSTP	Task Specific THINK Procedure

Appendix glossary

COM	2-Way Communication (internal and external)
EMP	Employee Influence
LEA	Leadership
PRM	Planning and Risk Assessment
RIG	Rig Specific Questions
RRR	Resources, Roles and Responsibilities
SPP	Strategies, Policies and Procedures
TRA	H&S Training and Competence
TRU	Trust (blame – just culture)

Contents page

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Executive summary

Introduction

On the 12th to the 16th of March 2010, a team from Lloyd's Register EMEA (Amy Annand and Garry Moon) visited the Transocean drilling rig, Deepwater Horizon, to conduct a review of the company Safety Management System, safety culture and safety climate.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the Safety Management System (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

Summary of results

The results of the maturity assessment and perception survey are summarised below and include:

1. Classification of industry recognised Safety Management System elements against maturity index criteria.

2. Key strengths and weaknesses identified.

3. Key findings from the perception survey.

1. Classification of Management System elements against maturity index criteria

Table 1 below summarises the reviewers' ratings of the safety culture on board the rig. The reviewers' ratings are a reflection of the interviewees' views of the organisation; these were then averaged to give the initial assessor rating. The five point maturity scale has the following categories:

1. Emerging (lowest category).

2. Managing.

3. Involving.

4. Cooperating.

5. Continuously improving (highest category).

Table 1. Maturity ratings

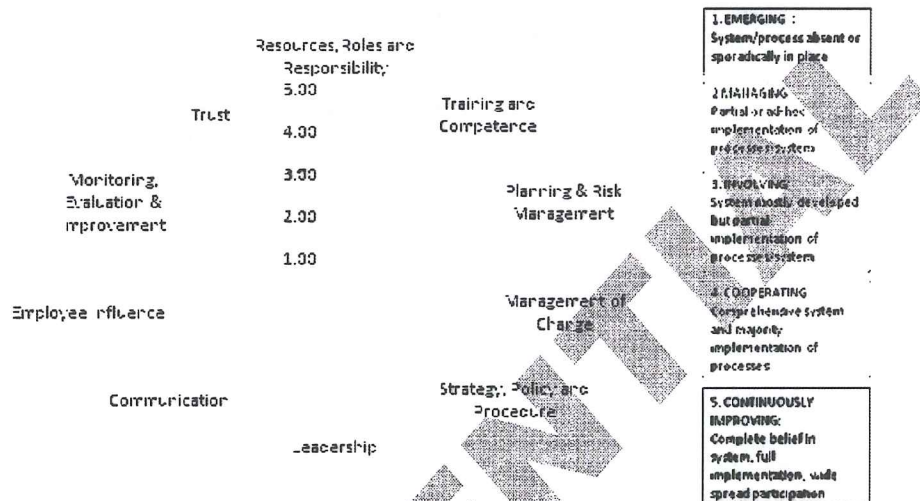| Element	Rating	Classification
Resources, roles and responsibilities.	3.3	Involving
H&S training and competence.	3.1	Involving
Planning and risk assessment.	3.3	Involving
Management of change.	2.5	Involving
Strategies, policies and procedures.	3.2	Involving
Leadership.	3.5	Cooperating
2-Way communications (internal and external).	3.0	Involving
Employee influence.	3.4	Involving
Monitoring, evaluation and improvement (learning culture).	2.9	Involving
Trust (blame – just culture).	3.4	Involving

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The data is also presented in the form of a spider chart (see Figure 1 below).

Figure 1. Spider chart of maturity categories

1. EMERGING :
System/process absent or
sporadically in place

2. MANAGING
Partial or ad hoc
implementation of
process/system

3. INVOLVING
System mostly developed
but partial
implementation of
process/system

4. COOPERATING
Comprehensive system
and majority
implementation of
processes

5. CONTINUOUSLY
IMPROVING:
Complete belief in
system, full
implementation, wide
spread participation

2. Key strengths and weaknesses

Overall, the findings of the LR EMEA review indicated that Deepwater Horizon was relatively strong in many of the core aspects of safety management. The strong team culture onboard Deepwater Horizon and the levels of mutual trust evident between crews means that the rig safety culture was deemed to be robust, largely fair, and inclusive, which was contributing to a 'just culture.' In general terms, both the interviews and the perception surveys confirmed these strengths and the areas where weakness existed.

The four main areas of strength on the rig were leadership, the workforce's influence on safety, levels of trust which exist between teams, and the provision of effective resources to support safe operations.

Rig leadership was identified as one of the strongest areas in this review. The Rig Performance Manager and rig based management were seen in a very positive light. The Rig Performance Manager clarified risk management policies and procedures with a 'Back to Basics' approach, which gained high levels of respect from the crew members. The OIMs, Captains, Chief Engineers and Senior Toolpushers were also all held in high regard amongst the workforce. The Rig Performance Manager's expectations were supported by them, and the impression this gives to the workforce is a united leadership who put safety first, and do this by providing the resources and time to conduct the job safely.

In relation to workforce influence, the findings from the LR EMEA review indicated that the overwhelming majority of participants felt empowered with regard to safety on the rig. In particular, almost everyone felt they could raise safety concerns and these issues would be acted upon if this was within the immediate control of the rig. Supervisor support for legitimate safety concerns was praised on a number of occasions, and it was clear that issues were elevated (when appropriate) via line management structures. In short, individuals reported that they could confidently approach rig management with any safety concerns they may have, knowing that, if their concern is justified, they will receive full backing. It must be stated at this point, however, that the workforce felt that this

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level of influence was restricted to issues that could be resolved directly on the rig, and that they had little influence at Divisional or Corporate levels.

There were high levels of mutual trust between and within teams on the rig. This included trust in Supervisors, rig based management and the Deepwater Horizon Rig Managers at Division. As previously mentioned in Leadership, much of the workforce appreciated policy clarity introduced by the Performance Manager's 'Back to Basics' initiative. Many people felt that if procedures were followed then management would support them, and this perception facilitates a strong safety culture. There was no evidence of any fear of reporting injuries or near hits (however, see comments relating to dropped objects below).

Participants had a good understanding of their roles and responsibilities with regard to safety. Individuals understood that they were responsible for their safety and that they were accountable for carrying out tasks in a safe manner. This culture of responsibility was led from the top and there was an accepted responsibility for the safety of other crew members. Individuals generally felt that sufficient resources (equipment and manpower) were provided to enable safe operations and were also generally positive about the time made available to plan, risk assess and carry out their operations safely.

The LR EMEA review also identified some areas of weakness onboard the Deepwater Horizon. These included: management of change, the application of TOFS in certain circumstances, performance monitoring, the complexity of some risk management procedures, and a fear of reprisal relating to dropped objects.

Management of change weaknesses related to a number of aspects of change including: task change; changes to policies, procedures and systems; change communication; and organisational change. The effectiveness of task change appeared to be highly dependent upon the knowledge and experience of those engaged in the task. Experienced and skilled crew members applied TOFS to task changes effectively, but many expressed concerns over the inconsistent use of TOFS by the less experienced crew members. With regard to policy, procedural and system change, those changes initiated from above rig management level were viewed in a less positive light. Specific examples included changes to hitch patterns, and the introduction of new coveralls. IT and system changes were also identified as being ineffectively implemented. People struggled with the rate of change because they felt new systems (i.e. GMS, RMS, and ICS) were introduced too frequently. Criticism was also voiced over the communication of the reasons and drivers for these changes, and the level of feedback on the status and progress of the change processes. The overwhelming perception on the rig is that people feel they are hugely distanced from the change decision processes, and that change is forced upon them and therefore there is little buy-in on the rig.

The perception survey indicated that one third of the workforce felt that the merger (Transocean/GSF) had negatively impacted on safety. This feedback supports a consistent view that organisational change is not managed and/or communicated well in Transocean company-wide.

There were negative perceptions around the use of START as a monitoring and improvement tool. Although most of the workforce believed that this was a useful process, many resented the 'one a day' rule, and invented cards in order to achieve 'compliance'. As a result, there is a lack of belief in the accuracy and usefulness of START data. False data also distorts monitoring assessments used to identify rig specific safety issues and trends. There was another common perception that there were too many audits (including PMAAs), with an estimated 26 planned audits for 2010.

Some participants felt that the risk management processes were repetitive and over-complex. This was mainly related to duplication of information on permits, isolation certificates, TSTPs and THINK Plans. This complexity and stated vagueness of the H&S manual documentation led to confusion and varied interpretation of requirements, even at OIM level.

Contrary to the aforementioned comments on Deepwater Horizon's strong safety culture, there was a stated fear of reprisal related specifically to the reporting of dropped objects. Feedback suggested that dropped object reporting equated to 'a trip to Houston' and a discipline case. It was clear that fear was stronger amongst the frontline workforce and some Supervisors. This fear was seen to be driven by decisions made in Houston, rather than those made by rig based leaders.

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3. Key findings from the perception survey

Ten of the twenty-five questions in the perception survey failed to reach 80% positive agreement. Of these, the five weakest areas were:

- Only 46.3% of participants felt that, if their actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), they could report it without any fear of reprisal (Q. 18). This may seem to contradict the reviewers' appraisal of trust on the rig; however it must be noted that a significant proportion of this is likely to be associated with dropped objects incidents and near-hits, which would align with the reviewers' findings.
- 46.3% of participants felt some of the workforce is uncomfortable with calling a TOFS when unsafe situations occur (Q. 24).
- 36.6% of participants felt they were not always informed of the outcome of changes that affect them (Q. 9).
- The same proportion (36.6%) felt there were too many steps in place to manage risks (Q. 10).
- One third (33.3%) of the workforce felt that the merger (Transocean/GSF) had negatively impacted on safety (Q. 22).

Eight of the twenty-five questions in the perception survey exceeded 90% positive agreement, with five of the twenty-five questions exceeding 95% positive agreement. These five related to:

- The workforce feels that they understand the safety procedures and hazards associated with their jobs because of the degree of training and support they have received (100%, Q. 12).
- Line Managers listened and acted on the workforce's safety concerns (97.6%, Q. 6).
- 97.6% of participants were encouraged to raise ideas and suggest safer ways to do things at work (Q. 2).
- 95.1% of participants believed they participated in the changes to working practices that affect them (Q. 8).
- 95.1% of participants would not take shortcuts when carrying out certain tasks (Q. 19).

Figure 2. Perception survey results for the Deepwater Horizon represented as a bar chart
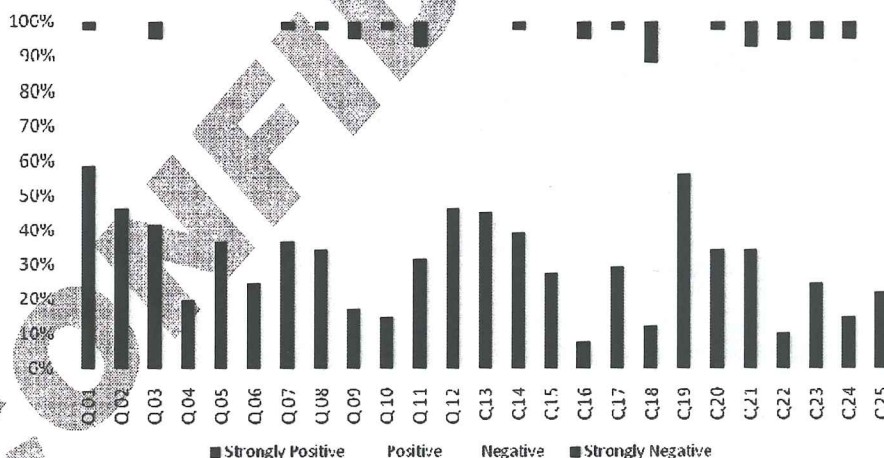
A table of the questions and crew responses survey data can be found in Appendix 1 to this report. Further analysis of the Deepwater Horizon survey data will be undertaken when it is incorporated into the North American dataset.

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Introduction

On the 12th to the 16th of March 2010, a team from Lloyd's Register EMEA (Amy Annand and Garry Moon) visited the Transocean drilling rig, Deepwater Horizon, to conduct a review of the company Safety Management System, safety culture and safety climate.

Rig background

Type: Semi-submersible, commissioned in 2001.
POB: 136.
Client: BP.
Other: During the review, there was a high degree of focus and activity relating to well control issues. Specialist contractors were onboard the rig to conduct controlled sub-sea explosions to help alleviate these well control issues. The process was subject to constant monitoring with restricted drill floor access. Drilling operations did not re-commence until the fourth day the LR EMEA team was onboard the rig.

The Deepwater Horizon (a heritage Transocean rig) had gone seven years since the last LTI (or DAFWC). There were a number of dropped object serious near-hit events and some incidents involving minor loss of containment (but no reportable over-boards).

It is noted that the client (BP) supported the LR EMEA review by allowing third party contractors to participate, but took no part themselves in the interview process.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the system (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

The offshore review concluded with a close-out meeting on board the rig which summarised the review findings without detailed scrutiny of the data produced. This close-out was followed by a further close-out meeting in Division again without reference to detailed data. Detailed analysis of review data will be developed and included in the final report.

Methodology and criteria

The assessment was carried out using a series of interviews, focus groups and site/activity observations where implementation of the Safety Management System was assessed using the Lloyd's Register maturity index. This was explained at the opening meeting on board the rig where the assessment scope, criteria and programme was confirmed, confidentiality assured and the reporting mechanism explained.

Areas selected for an appraisal of the climate and maturity of the Safety Management System and its implementation are listed below:

- Resources, roles and responsibilities.
- H&S training and competence.
- Planning and risk assessment.
- Management of Change.
- Strategies, policies and procedures.
- Leadership.
- 2-Way communications (internal and external).
- Employee influence.
- Monitoring, evaluation and improvement (learning culture).
- Trust (blame – just culture).

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Personnel, operational areas and processes sampled

Focus groups and interviews carried out over the assessment period are listed as follows:

- Numbers assessed = 41.
- Percentage of POB = 32%.
- 14 one-to-one interviews of rig team members.
- 7 focus groups involving 27 people.

Operational areas and processes sampled during the assessment are summarised as follows:

- Drilling.
- Deck.
- Marine
- Maintenance.
- BP third party service hands.

Meetings and discussions:

- Meetings (daily pre-tours for drilling/deck crews, general safety meeting, department-specific safety meeting, third party service hands safety meeting).
- THINK Plan observations (heavy lift of drill pipe from the conveyor and de-isolation of engine No. 5).
- Informal observation of operational activities (e.g. drill floor and lifting operations).
- Drill observations (fire team response and bridge emergency control centre)

Please note that this report refers to various categories of the rig based workforce who were interviewed as part of the review process. They included:

- Management (OIM, Senior Toolpusher, Captain, Chief Engineer).
- Supervisors (Electrical Superiors, Mechanical Supervisors, Chief Mechanics, Chief Electricians, Chief Mate, Deckpusher, Crane Operators, Toolpusher, Tourpusher, Drillers, Assistant Drillers etc.).
- Frontline crews (Roustabouts, Floorhands, Derrickmen, Mechanics, Motormen, Electricians, Seamen/Welders/Painters etc.).
- Skilled support (RSTC and Medic)
- Third party service hands (Equipment Technicians, Performance Co-ordinators, Sample Catchers, Mud Loggers etc.)

Presentation of rig specific results

Output from the assessment processes is presented in the assessment tables:

Element reviewed: Resources, roles and responsibilities	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Overall, 85.4% of the workforce agreed they always had enough people to carry out the work safely. 90% also felt they had enough equipment and financial resources to manage risks, and 87.8% of the workforce felt they had enough time to do their jobs safely. These results indicate that an overwhelming majority of staff did not feel resourcing was an issue with regard to safety.

Assessment output/evaluation:

Interviews revealed that participants had a good understanding of their roles and responsibilities with regard to safety. Individuals understood that they were responsible for their own safety and that they were accountable for carrying out tasks in a safe manner. This culture of responsibility was led from the top and there was an accepted responsibility for the safety of other crew members.

Supervisors understood that a key responsibility was ensuring that their crews could identify hazards and carry out work in a safe and controlled manner. Interviewees generally felt that sufficient resources (equipment and manpower) were provided to enable safe operations.

Interviewees were also generally positive about the time made available to plan, risk assess and carry out their operations safely. However, some people had contradictory views in that planning time was not always adequate during downtime situations. In relation to the implementation of safe operations, people generally felt they were given plenty of time. Some Supervisors and Managers commented that administration requirements reduced the amount of time they were able to spend with their crews. Supervisors particularly felt they needed more time with their crews in their work areas in order to be more effective in supporting a safe working environment. This view was also shared by people in key support positions (e.g. RSTC and Medic) who felt their jobs had an increased amount of administrative burden.

The majority of people also felt there was adequate provision of equipment, with the exception of the appropriateness of some PPE. Particular references were made to coveralls, which were perceived to be unsuitable and restrictive for this working environment. Some crew members expressed a concern over issues relating to equipment reliability, which they believed was as a result of drilling priorities taking precedence over planned maintenance. Some participants also felt that, in some cases, certain groups were not held accountable for the proper use and care of equipment. The LR EMEA reviewers could not verify the accuracy of this feedback, but it is a potential issue that rig management should address.

Strengths:

- Participants had a good understanding of their responsibilities in relation to the safety of themselves and their work colleagues.
- Supervisors understood that a key responsibility was to ensure their crews worked in a safe and controlled manner.
- Manpower was seen to be sufficient to enable safe working practices.
- Most participants felt they had enough time to plan and execute tasks safely.
- Availability of PPE was generally regarded as good.

Significant comments that illustrate these findings:

"I will not, in my capacity, do any job if I don't have a safe amount of people ... and the company backs me 100%."

"They've always told us that we got the time to do the job, and I take them at their word."

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> *"I have enough resources ... the Rig Manager backs me 100%. He's a very strong safety leader."*

Weaknesses:

- It was felt that there was an increase in administrative work that restricted the time that Supervisors and other key roles could spend coaching and mentoring.
- People questioned the suitability of some PPE.
- Some participants were concerned with equipment reliability.

Significant comments that illustrate these findings:

> *"Attitude is in direct relation to the amount of paperwork that's forced upon the crews.*

> *"I would ensure equipment reliability is better. At nine years old, Deepwater Horizon has never been in dry-dock. They replace top drives, block and crowns during rig moves. We can only work around so much."*

> *Very negative feelings relating to the new coveralls: "too hot ... you get heat rash everywhere. You have to wear it all day long and everything absorbs into them ... mud gets trapped between your clothes and your arms."*

> *"Run it, break it, fix it, that's how they work and the Drilling Department should be held more accountable than what they (currently) are."*

Element reviewed: Training and competence	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Perception survey results showed that 100% of participants felt the training and support they had received gave them a full understanding of safety procedures, and the hazards associated with their tasks. In addition, 95% of participants felt that they had to demonstrate they could do their jobs safely before being considered competent.

Assessment output/evaluation:

The perception survey findings indicated that the participants felt training and competence was a very strong factor. The LR EMEA reviewers agree with this perception, to a point, but were made aware of some concerns relating to processes associated with training and competency assurance. Most people agreed that training was readily available, appropriate, and, in many cases, met their individual needs. Those who had received technical training reported that it was excellent.

However, opinions were divided on the suitability of some of the training and the way it was delivered. There were some criticisms relating to SLF and SLT courses being delivered by onshore people who were perceived to have insufficient operational rig knowledge. A number of people felt that there was too much training, and the training requirements changed too frequently. This issue is compounded by the requirement to attend training courses during field breaks. Individuals accept this for training that they value, but would be quick to criticise anything that is perceived to be less than value-adding.

Some courses were subject to criticism by people who had not attended them. It would appear that these judgements were based on a perception of knowledge that had been gained by crew members who had attended. In short, Supervisors and key support crew members based their opinions on the competence of the attendees. An example of this was the adequacy of the TOPS course to prepare new hires for life on the rig and the basic tasks required by their roles. As a result, many people felt there were competency issues with new hires and the 'orange hats' needed more training.

A rig wide performance metric for training is based on compliance with the training matrix (i.e. completion of training courses). In some cases, compliance with an aspect of training can be achieved by watching a video, whilst other aspects require the attendance at a lengthy course during a field break. There appears to be insufficient attention paid to the complexity and time demands of the

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training. The focus appears to be on 'ticking the box' to complete the matrix, rather than an emphasis on learning. This approach can lead to instances of poor planning, inappropriate scheduling (sequencing), training overload, and gaps, both in training delivery and knowledge. Theoretically, this approach means that the training metric could be achieved by providing comprehensive training for the majority, whilst leaving some individuals with virtually no training at all. The risks associated with this include: crew members not getting sufficient time or preparation to practice newly acquired skills, knowledge saturation, or knowledge gaps.

Strengths:
- The amount, appropriateness, and accessibility of training were generally seen as meeting the needs of many of the participants.
- Technical training was seen as excellent.

A significant comment that illustrates these findings:

"We get a lot of training ... they'll give you anything you want. Transocean's well control course was top notch as far as I am concerned."

Weaknesses:
- Shore based trainers' experience was questioned by a number of participants who felt trainers did not have sufficient operational rig knowledge to make the training meaningful.
- TOPS training was not perceived to sufficiently prepare new hires for tasks and life on the rig.
- There were stated concerns relating to the competency of new hires.
- A number of participants felt there was too much unsuitable or ineffective training and that the training requirements changed too frequently.
- The performance measure that assesses the amount of training completed (as identified on the matrix) was seen by some participants as not enabling the best learning environment.

Significant comments that illustrate these findings:

"We are constantly getting new guys (Roustabouts) and some of them haven't even seen oil fields before. Sometimes when I look down on the deck, it looks like a pumpkin patch (because of all the orange hats)."

"There are issues with new hires and bringing people onto this rig that don't belong here ... this ain't no nursery and it ain't no old folks home either."

"The training matrix has inappropriate training courses that are not relevant or too much for some roles (e.g. SLF for everybody)."

TOPS course: *"not worth a flip. The guys don't grasp offshore working life on the rig ... they come out here thinking 'not hurrying' means to work inefficiently."*

"TOPS school training is not hard enough. Some of the guys out here shouldn't be out here, but you gotta let HR deal with it."

"TOPS school is a joke. It teaches you theory, but doesn't tell you how to move pipe or do rigging."

SLF: *"didn't get a lot out of it ... the people doing the training were RSTCs and Medics, and they didn't get the right questions across."*

"SLT was boring and repetitive, and the trainers needed a reality check."

Element reviewed: Planning and risk management	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Perception survey results showed that 36.6% of the participating workforce felt that there were too many steps in place to manage risks, while 68.3% felt tasks were always adequately planned before work was started. Worryingly, 24.4% of the participants reported often seeing THINK Plans not being properly carried out by others on the rig. Additionally, 14.6% of those surveyed felt they often saw unsafe behaviours on the rig. These results suggest that a significant proportion of the workforce feel that improvements can be made with regard to risk management and planning on the rig.

Assessment output/evaluation:

In contrast to the relatively negative perception survey results, the reviewers felt overall 'planning and risk management' had some key strengths.

It was clear that there was a belief that the concept of the THINK process was sound and contributed to safe working practices. This was further aided by the fact that the THINK hierarchies were generally understood by the interviewees and were seen as useful and appropriate. This level of awareness had not been typically evident on other rig visits conducted as part of this review. Key contributory factors that supported this perception included:

- Verbal THINK Plans were accepted as a beneficial risk management tool.
- Supervisors monitored the understanding of risk controls via conversations, rather than verification of documentation.
- People understood CAKES and how it supported THINK planning processes.
- Individuals used CAKES to enable a decision of when THINK Plans needed to be taken to the next level.
- People understood that all hazards could not be identified and that constant awareness of new and emerging hazards was essential.
- The purpose of THINK, as a risk assessment tool, was to understand prevention and mitigation measures, rather than create documentation.

Some participants felt that the risk management processes were repetitive and over-complex. This was mainly related to duplication of information on permits, isolation certificates, TSTPs and THINK Plans. Overall, participants saw these processes as a necessary part of the risk management process. A minority of individuals viewed the written THINK Plans and Prompt cards as an aid to cover their backs; further discussions suggested this may be the legacy from previous leaders who required written THINK Plans for every task.

Another positive, which has not been consistently evident on other rigs, was that hazard identification was recognised as a strength, as evidenced by well-constructed written THINK Plans, and use of Prompt cards and TSTPs. The perceived weakness within this process appeared to be the recognition of changes in task conditions and hazards, and the application of a robust response (see Management of Change).

A noteworthy observation was the full adherence to the risk based colour-coded rig zones. For example, access to the red zone was only authorised for those who had been made fully aware of THINK Plans and associated permits. It was recognised that this was a major control mechanism for dropped object risks and this rule was highly valued by the workforce.

Although the perception survey indicated that people would not be confident in taking shortcuts, the survey also clearly indicated that a quarter (24.4%) of the participants had observed THINK Plans which were not carried out properly by others on the rig. This may relate to people's observations that the THINK planning process is not strictly adhered to (e.g. creating plans during or even after the task) as potential downtime approaches, or during downtime. Although there was a general willingness and ability to call TOFS, feedback suggested that, at times of operational pressure and downtime, some crew members would be less willing to stop the job for fear of slowing things down.

In addition, there were some potential human fatigue issues that were identified during interviews.

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Recently, a 21 days on, 21 days off hitch has been introduced for Transocean personnel. LR EMEA recognises that this change is still in the transition phase. However, many crew members reported that this change was affecting the workforce's motivation, attention, and attitude, especially during the final week of the hitch. LR EMEA also recognises that Transocean rigs in other divisions work 28 days on, 28 days off without any (reported) significant issues. However, reality or not, the perception is that this change has introduced new risks due to fatigue, and close attention should be paid to this issue throughout the transition period as the crews adjust accordingly.

Crew members also reported a high level of dissatisfaction with regard to the type of coveralls they are required to wear during the spring and summer months in conditions of elevated heat and humidity. They believed that the coveralls contributed to the fatigue issue. The basic causes of this issue are unclear; it may be down to suitability of the coveralls, or a lack of consultation and miscommunication of change (see Management of Change).

Concerns were raised over the lock-out/tag-out control issues within the Permit to Work system. Feedback suggested that the process is too complicated. The focus of concern was associated with the Performing Authority (PA) and the nominated Competent Person (CP). The PA does not have his own lock-out key and is dependent on key holders to ensure that isolation (and de-isolation) is carried out in a timely and safe manner. Likewise, the process is very dependent upon the competency and awareness of the CP, leaving significant exposure to the potential for human error. It was unclear whether this was due to vagueness in the process description within the CMS Manual, an issue with interpretation of the lock-out/tag-out procedure, or the inconsistent implementation of the controls.

The reviewers felt that planning and risk management performance levels onboard the Deepwater Horizon were stronger than the perception survey results indicated. Reasons for this may be that a good level of hazard/risk awareness exists in the crews, coupled with a recognition that, although core safety processes are sound in concept, there are frailties in the implementation. In short, this can be summed up in that the crews recognise shortcomings in the processes and competence levels, but compensate these by their focus on safe practice (e.g. robust application of the red zone rules). The reviewers felt that this reflected an appropriate and pragmatic approach to planning and risk management, while the workforce themselves focused their perception survey feedback on the weaknesses.

Strengths:

- Participants believed that THINK was a useful process for managing risk.
- People generally understood the hierarchy of the THINK process, and how and when the different levels should be applied.
- Hazard identification was viewed as a relatively strong area.
- Colour coded, risk based access zones around the drill floor were well established, enforced, and valued by the workforce.
- Participants understood the frailties in the application of the core safety processes and compensated for these with a pragmatic risk management approach.

Significant comments that illustrate these findings:

THINK: "it's the best tool that the company has ever had … good risk assessment tool and definitely seen as a planning tool. It helps to keep us safe."

Applying the THINK hierarchy: "it's been more clear in the last six to eight months. We've been getting rid of rig specific procedures and going 'Back to the Basics' (Rig Performance Manager clarification) … this had growing pains to change our mindset, but it's looking up and up."

"I feel safe because I don't think there's any job on this rig that is unsafe, because you can plan it right."

Prompt cards: "I like them … they keep you out of trouble."

Rig floor has a drops object hazards zones: "anywhere in the red zone, you need Prompt card with THINK and TSTP, and that makes me more comfortable when I see that."

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THINK: *"I think it's a good tool. You have to do it together ... it's hard to identify all the hazards that's up there."*

THINK: *"it's good if used properly and not pencil whipped. These guys are taking it more serious now."*

Weaknesses:

- Feedback that the risk management processes were repetitive and over-complex. This was mainly related to duplication of information on permits, isolation certificates, TSTPs and THINK Plans.
- A minority of individuals who perceived that written THINK Plans and Prompt cards were created to 'cover their backs'.
- The recognition of changes in task conditions and hazards, and the application of a robust response.
- A perception that risks were increasing in relation to human fatigue, mainly relating to changes in hitch patterns, but also to the selection of coveralls for use in a hot and humid environment.
- People expressed concern over complications and the consistent application of the lock-out/tag-out processes within the Permit to Work system.

Significant comments that illustrate these findings:

"Lock-out tag system is an accident waiting to happen ... If I (i.e. the Performing Authority) had my own lock and was the only one who had a key to the lock then I know I am the only one that can unlock it."

Too many risk management steps: "as long as you do your paperwork you'll be safe."

"There's so many rules we've got to live by."

"Too much written THINK, too much written Prompt and it's CYA."

He had mixed feelings regarding THINK: "it's CYA 50% of the time ... but any time I see something happen, there wasn't a written THINK Plan."

Fatigue issues with the 21-on 21-off policy: "on that third week, the Hands get quiet and that's then when I get worried."

He had worries about implementation of the 21 on 21-off blanket policy: "you can see it wearing down on them ... it is definitely increasing the risk of an incident."

21-on 21-off: "big difference in their attitudes on the third week ... it's mentally draining and I've got to watch my guys closer."

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Element reviewed: Management of change	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

The perception survey indicates that 95.1% of the participants felt that they participated in the changes to working practices that affect them. However, a lower proportion (63.4%) felt that they were always informed of changes that affect them. Also, a third of the workforce felt that the merger had impacted negatively on safety performance.

Assessment output/evaluation:

Management of Change (MoC) was rated as the lowest performing area. However, some aspects of MoC on the rig were viewed positively; these included engineering change/modifications and the 'Back to Basics' approach to clarify core safety processes. Feedback relating to the effectiveness of task changes was very mixed, and appeared to be highly dependent upon the knowledge and experience of those engaged in the task. Experienced and skilled crew members applied TOFS to task changes effectively, but, given the high number of new hires (i.e. orange hats) on the rig, many expressed concerns over the inconsistent use of TOFS.

The Rig Manager led a successful change initiative referred to as 'Back to Basics', to update the way THINK was implemented on the rig. A structured approach was adopted to take the rig from a situation of confusion and frustration to a more participative, communicative process, based on consultation and shared understanding. The Rig Manager personally conducted workshops with the crews and achieved individual 'buy-in' by the delivery of a consistent and pragmatic message. This was hugely appreciated by the crews.

Changes initiated from above rig management level were viewed in a less positive light. Specific examples included changes to hitch patterns, and the introduction of new coveralls. People did not feel they had been consulted, and perceived that their views had little, or no influence at Divisional and/or Corporate level. Criticism was also voiced over the communication of the reasons and drivers for these changes, and the level of feedback on the status and progress of the change processes. The overwhelming perception on the rig is that people feel they are hugely distanced from the change decision processes and that change is forced upon them and therefore there is little buy-in on the rig.

IT and system changes were also identified as being ineffectively implemented. People struggled with the rate of change because they felt new systems (i.e. GMS, RMS, and ICS) were introduced too frequently. The perception being that a new system was introduced before the previous change had been properly transitioned and understood. Many of these changes required a specific level of IT technical capability, which is not typically available throughout a rig, and it was felt there was not sufficient support provided to manage these changes.

The perception survey indicated that one third of the workforce felt that the merger (Transocean/GSF) had negatively impacted on safety. This feedback supports a consistent view that organisational change is not managed and/or communicated well in Transocean company-wide. At rig level, however, local management changes (i.e. the change in Rig Manager) were seen to have brought about significant improvement, and some people stated that the merger had in fact resulted in enhanced manning levels and an improvement in the working environment.

Strengths:

- MoC at rig level was positively viewed. People felt it included involvement, open communications, and feedback.
- The Rig Manager's 'Back to Basics' approach to THINK was very well received on the rig.
- Some people felt the Transocean/GSF merger introduced positive changes (e.g. new Rig Manager and enhanced manning levels).

Significant comments that illustrate these findings:

"Paul Johnson is the one who got us back to basics."

> *"The best thing they did was bring the RMP out and say that it's 'By the Book' ... the new RMP is a lot tougher, but he's clear and he's fair."*

Weaknesses:

- The participants did not feel they were adequately consulted about change issues.
- The participants felt that, even if they were consulted, they would have little influence at Divisional and/or Corporate levels; basically they felt they are not listened to above rig management level.
- There is a lack of clarification on change drivers or the reasons for change.
- System and process changes were seen to be ineffectively implemented.
- Organisational change (company-wide) was seen to be poorly managed, potentially affecting safety in a negative way.

Significant comments that illustrate these findings:

GSF/Transocean merger: *"the merger was poorly handled and there was mass confusion as to what direction they wanted to go in ... mainly due to lots of people leaving."*

With regards to implementation of new systems (e.g. GMS, RMS, and ICS): *"we get a chance to learn one and boom! Here's another one ... if they would just leave everything alone for a year and let the dust settle then we could figure out what we've got."*

"It takes a long time to change elements of a procedure or they include every little detail from an After Action Review into a TSTP and people don't listen anymore."

"All of these mandates come from Corporate ... Transocean wasn't like that before (i.e. pre-GSF). It became a big amoeba that has rolled into so many drilling contractors, that it's lost its personal touch."

"Corporate should listen more to us when they make a decision, instead of making us live with it. I just want them to get our opinion more before they make a decision."

"Poor communication of change and why (they need to change) ... how is this change benefiting us?"

Transition: *"we didn't know anything until we were told to do it." "No heads up."*

Blanket policy changes that impacted the rig (e.g. FR coveralls, 21-on 21-off, lace-up boots etc): *"if part of the decision making process had come from the rig, it would have been better."*

"They make the changes and we have to deal with them for whatever reason."

Element reviewed: Strategies, policies and procedures	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Survey results showed that 12.2% of participants believed some rules and procedures were difficult to understand and complicated, so they did not always follow them; only 4.9% of participants believed that they would feel confident taking shortcuts when carrying out tasks.

Assessment output/evaluation:

This workforce showed a good understanding of the H&S Manual which was evidenced by the way it was used and referenced. Overall, the manual was considered to be useful as it provided a framework for consistent implementation. The main driving force behind the use and understanding of the H&S Manual was that the workforce knew, if they followed procedures, management would back them and their actions. It was clear that, even if people did not agree with what was said in the manual (or policies), they would comply with them. This behaviour seemed to be driven by the Rig Managers and was cascaded to the frontline workforce. If the workforce adhered to the H&S Manual procedures because they actually believed in its value and usefulness, this would demonstrate a more mature safety culture.

The manuals were readily accessible to crews via paper or electronic formats. Paper copies were definitely preferred and they were found throughout the rig. Copies observed by the reviewers were over a year out of date (dated 8th January 2009; there have been 6 revisions since), indicating document control is an issue.

However, there were a number of consistent criticisms of the H&S Manual, and the procedures and expectations contained within it. The identified weaknesses were that it is vague or ambiguous and, in many areas, requires interpretation or clarification. Examples include:

- How to fill out START cards.
- Use of the THINK process including Prompt cards.
- Permit to Work for isolations (lock-out/tag-out).
- Fuelling the crane (cease or not ceasing hot work).
- Permit to Work: 12 or 24 hours etc.

A large number of people felt that the interpretation and approach of H&S procedures varied from OIM to OIM (see the Leadership section for additional details). It was also readily accepted that Supervisors or the RSTC would provide clarification to the frontline workforce, which meant they did a good job of relaying information contained within the H&S Manual, but the success of this approach is reliant on the competency and willingness of Supervisors.

Finally, although the majority of the workforce felt the START process supported safety, nearly everyone believed the "one a day" rule was counter productive (see Monitoring, evaluation and improvement).

Strengths:

- The H&S Manual was considered to be useful as it provided a framework for consistent implementation.
- Although not everyone used the document directly, supervisory knowledge and attitudes meant they supported their workforces' understanding of the manual and associated procedures.
- Access to manuals was seen as good.

Significant comments that illustrate these findings:

SMS: "it's pretty easy to understand."

SMS: "do they understand it? No. Do they know it? Yes, because the Supervisors do a good job of relaying the information."

SMS: "a lot of good information ... it helps you go further in your career because you can see other

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aspects. "

Weaknesses:
- The H&S Manual was perceived as vague and ambiguous in areas, and interpretation was often required.
- The interpretation and application of some H&S procedures varied from OIM to OIM.
- There were some document control issues identified.
- 'One a day' START card policy was seen as counter productive.

Significant comments that illustrate these findings:

No consistency with the lock-out tag-out system: "there is a lack of clarity from Houston with concrete set-in-stone rules relating to Permit to Work, lock-out tag-out, and rig floor procedures."

H&S Manual: "a lot of grey areas. Different OIMs have a different take on H&S procedures, or even overkill. It gets foggy from hitch to hitch ... so the best thing to do is ask the RSTC."

"The H&S Manual is written in legalese. It is generic and vague."

"H&S Manual leaves the door open for so many different interpretations."

H&S Manual: "I think it's kind of hard to understand ... it's like you've got to go to a class to understand it because of the way it is set up.

START: "now that it's forced, I don't think we get the quality anymore."

"The START process is a good idea but it's now become a graph game."

START card 'one a day' rule: "as soon as you put a gun to somebody's head, is he ever gonna be your buddy again?"

'One a day' START rule, he had mixed thoughts: "it ensures participation, but it takes some of the lustre away because people have the mindset that I have to do it, not I want to do, and that's a forced safety culture."

Element reviewed: Leadership	
Method of review: Focus groups and individual interviews.	**Review category:** Cooperating

Perception data:

12.2% of the workforce who took part in the survey felt that management put operational performance (e.g. drilling) before their safety. 70% of the workforce believed that Transocean rewards them when they carry out their work safely.

Assessment output/evaluation:

Leadership was identified as one of the strongest areas of this review. The Rig Performance Manager and rig based management were seen in a very positive light. As previously mentioned, the Rig Performance Manager clarified risk management policies and procedures with a 'Back to Basics' approach, which gained high levels of respect from the crew members. The OIMs, Captains, Chief Engineers and Senior Toolpushers were also all held in high regard amongst the workforce. The Rig Performance Manager's expectations were supported by them, and the impression this gives to the workforce is a united leadership who put safety first, and do this by providing the resources and time to conduct the job safely.

Individuals reported that they could confidently approach rig management with any safety concerns they may have, knowing that, if their concern is justified, they will receive full backing.

It is important to note that lines of responsibility for safety have been made relatively clear by the

management team and this drives a number of positive behaviours around risk assessment, and the implementation of core safety policies. The standard rule is that policies will be complied with at all times, however compliance with this expectation is threatened by two key issues:

1. Feedback suggests that the OIMs have interpreted and administered some policies differently, which means that there is confusion amongst the workforce (e.g. lock-out tag-out, energy isolations, 12/24 hour permits etc.) and standards change with the OIM change-out.

2. The culture on the rig indicates that compliance with procedures will minimise the potential for disciplinary action in the case of an incident or near-hit. However, there is a level of mistrust, mainly directed towards Corporate and higher Divisional management levels, with regards to the disciplinary process and associated blame in relation to an incident or a near-hit involving dropped objects. This is discussed in more detail in the Trust section.

People's feelings about leadership were also affected by a perceived lack of recognition from Division relating to Deepwater Horizon's achievement of seven years without any LTI. It was clear that this was important to the workforce who were proud of this achievement and were motivated to maintain this record. This is not to say that rewards for this type of achievement should be formalised, but crews clearly felt that any form of recognition that was offered was not equal to the efforts required to keep LTIs at zero.

Finally, nearly all participants believed that Transocean genuinely felt that their safety was important to them. This included Corporate and Divisional leaders (to a lesser extent).

Strengths:
- The Rig Performance Manager's efforts to go 'Back to Basics' has increased clarity of core safety processes, and this was appreciated by the workforce.
- The rig based leadership was also highly regarded by the workforce.
- The participants felt that Corporate leadership genuinely believed the safety of the workforce was important.

Significant comments that illustrate these findings:

Rig leadership: "fantastic four: nothing but respect."

Rig leadership: "never had a problem with any of them. All very easy to talk to, all very approachable. They watch out for their people and if they tell you they're gonna do something, they'll do it."

"These Toolpushers are good, they understand the equipment and would back you 100% of the time. They will NOT let anyone work above you."

"Rig management does walk-the-talk, but understands that there has to be a happy medium and not ram-rod performance."

Management: "as long as they think you are giving 100%, they will go out of their way to help you."

Very positive about the Rig Manager: "he's straight up."

Leadership was held in very positive regard: "visible, approachable, and safety orientated."

He equated Supervisors with trust, saying "we have to be there to protect the workforce ... we're like the kidneys!"

Weaknesses:
- OIMs taking different approaches to some H&S procedures created unnecessary confusion amongst the workforce.
- Corporate and Divisional leadership was not perceived in a particularly positive light, particularly in relation to disciplinary action and blame.

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- There was a perceived lack of recognition from Division on the rig's safety performance achievements.

Significant comments that illustrate these findings:

"PTW rules vary from OIM to OIM and sometimes you don't know what's what. People aren't as clear on procedures as they used to be. It's fine one day, but not OK the next and nothing's changed (i.e. the job), but they don't understand."

"Every time you have an incident, they come up with knee-jerk reactions."

"People think that an investigation means a trip to Houston."

"It's not so much us who will see the repercussions, it's our Supervisors ... and you can see the stress on the Supervisors now."

"We feel like there's a burn culture (from Corporate). We will have to go to the Houston office and be grilled (if there is an incident)."

"They (Division) know your name when you do something bad, but not when you do something good."

Corporate leadership disconnect between the top boys and the rig: "there's a lot of disconnect ... they think they understand, but they don't because they don't live the (rig) life."

"Seven years without an LTI, with very little recognition. Why do people in the office want to fight that?! We went seven years without an LTI not because we got lucky, but because we work good together as a team. It feels like they only pay attention to the bad things and not the good ... and it brings morale down."

"Six years without an LTI and no recognition was a slap in the face."

Element reviewed: 2-Way communication	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Perception survey results on aspects of communication were relatively positive, although 12.2% believed they did not get all the information they needed to do their jobs safely. By comparison, only 2.4% of those interviewed felt their Line Manager did not listen and act on their safety concerns.

Assessment output/evaluation:

Safety performance expectations, including objectives and goals, have been clearly defined by the rig leadership and communicated to key personnel on the rig. The RSTC and Supervisors were the focal points for providing clarification and access to specific safety and procedural information. Safety Alerts were seen as useful, relevant and timely. Pre-tour, Toolbox Talks, and departmental safety meetings were all seen as useful ways to disseminate information in a timely manner, as well as a good communications forum.

The general safety meeting was seen to be less effective as a communication mechanism, as it was perceived to focus more on statistics than safety. Although some of the rig management did participate in these meetings, crew members felt they got little value from it. The workforce (and the LR EMEA reviewers) felt this was an area where the rig could make highly visible improvements in a relatively short amount of time.

Further communication concerns were expressed in relation to MoC and the application of discipline procedures. People felt that the reasons for, and the decisions made, relating to changes that affect them are not fully explained, and there is no effective consultation or feedback process. Similarly, when disciplinary action is deemed necessary, there is little (appropriate and high level) explanation

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provided to the rig workforce; this leaves the situation wide open to interpretation, distortion and rumour.

Strengths:

- Safety performance expectations, including objectives and goals, have been clearly defined by rig leadership and communicated to key personnel on the rig.
- The RSTC and Supervisors were the focal points for providing clarification and access to specific safety and procedural information.
- Safety Alerts were seen as useful, relevant and timely.
- Pre-tour, Toolbox Talks, and departmental safety meetings were all seen as useful ways to disseminate information in a timely manner, as well as a good communications forum.

Significant comments that illustrate these findings:

"Communication from Division is clear ... I may not always agree with them but they are clear."

"Clear-cut expectations with 'this is how we're going to do this'."

"It's easy for 2 or 3 people to interpret it (i.e. the H&S Manual) two or three different ways, so we go to the RSTC to get it cleared up."

Weaknesses:

- The general safety meeting was seen to be less effective as a communication mechanism as it was perceived to focus more on statistics than safety.
- Change management communication and consultation (including the communication of reasons for change, and obtaining feedback from the workforce) were seen to be ineffective.
- An appropriate level of communication relating to (rig) discipline cases is lacking, leading to the potential for distortion and rumours.

Significant comments that illustrate these findings:

"Poor communication of change and why (they need to change) ... how is this change benefiting us?"

"When people get run off they should tell us why (without all the details)."

General safety meeting: "I don't understand some of the graphs they show ... don't understand what they have to do with safety."

Safety meetings: "the general safety meeting is a waste of time ... it's just a bunch of numbers that you don't understand."

Element reviewed: Employee influence	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

97.6% of the participants surveyed felt that they were encouraged to raise ideas and suggest safer ways to do things at work and 90.2% felt they got to hear about, or participate in, safety improvement initiatives. Worryingly, 46.3% of the people surveyed felt that some of the workforce were uncomfortable calling a TOFS when unsafe situations occurred.

Assessment output/evaluation:

A consensus was evident between the perception results and the reviewers' assessment, which indicates that that the overwhelming majority of participants felt empowered with regard to safety on the rig. In particular, almost everyone felt they could raise safety concerns and these issues would be acted upon if this was within the immediate control of the rig. Supervisor support for legitimate safety concerns was praised on a number of occasions, and it was clear that issues were elevated (when appropriate) via line management structures.

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Beyond the rig management, however, participants felt that safety concerns that they raised were not always fully considered and addressed. A significant number of the workforce were frustrated and dissatisfied with regard to some recent safety related decisions made at Divisional level. They felt that the introduction of the 21-on 21-off hitch, and the long sleeved FR coveralls both contributed to fatigue problems for the crews. Deepwater Horizon personnel provided feedback to the Division and the perception was that this was not fully considered or addressed. The crews had a recent experience where their concerns had been listened to and acted upon by Division (i.e. optional use of Iron Clad gloves). However, the workforce now perceived no one was listening to their current safety concerns, and they did not understand why they were being ignored.

Most crew members indicated that they feel comfortable calling a TOFS and that management would back them. However, many Supervisors had a different perspective. They did not feel confident that junior crew members would always intervene and stop a job on safety grounds. Reasons for this would appear to be linked with a lack of hazard awareness (especially under changing task conditions) or a reluctance to call a TOFS on other, more experienced, colleagues.

Another issue negatively impacting employee influence was participants' perceptions relating to little or no recognition of their LTI safety performance (see Leadership section for details). The crews felt they had worked as a team to achieve something; they had achieved something significant (i.e. seven years without an LTI), but they received little or no recognition. This led to a perception within the crews that whatever they did or achieved had no influence at all at Corporate or Divisional level.

Strengths:
- Deepwater Horizon crew members felt empowered in relation to safety onboard the rig.
- The overwhelming majority of participants felt they could raise safety concerns and that these would be listened to by their Supervisors and rig management.
- Most participants indicated they felt they would be comfortable calling a TOFS.

Significant comments that illustrate these findings:

They felt you could raise safety concerns and their Supervisors would back them: "if you're right ... and they'll challenge you, and that's OK, then they're behind you 100%."

"The difference on this rig is that management has given everyone the right to stop the job, and it really does work."

"If I don't understand all the hazards then I ask my boss."

Even during downtime, they took the approach "let's plan it together and then get it done when we're ready."

Weaknesses:
- Crew members felt a level of frustration because it was perceived to be very difficult to influence safety decisions at Divisional and Corporate levels.
- Supervisors believed that not all junior crew members were comfortable calling TOFS.
- Crew members felt that their positive contributions and achievements had little or no influence at Divisional and Corporate levels.

Significant comments that illustrate these findings:

"TOFS is understood completely ... but done in all circumstances? No, not necessarily. Crew don't want to question a direct superior (because they control their future)."

"Seven years without an LTI with very little recognition. Why do people in the office want to fight that?! We went seven years without an LTI not because we got lucky, but because we work good together as a team. It feels like they only pay attention to the bad things and not the good ... and it brings morale down."

"Six years without an LTI and no recognition was a slap in the face."

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Date: 11 May 2010
Prepared by: Garry Moon/Amy Annand   Lloyd's Register EMEA

Element reviewed: Monitoring, evaluation and improvement (learning culture)	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Results from the perception survey show that the majority of participants felt that START, TOFS, audits, near-hits and incident investigations helped them to prevent incidents from happening again (87.8%). There was less agreement (73.2%) with the idea that all incidents were reported, investigated and followed up.

Assessment output/evaluation:

The reviews identified a number of differing perceptions in relation to the incident investigation processes. Many people identified that the core purpose of the investigation was to identify the root causes and find safer ways of working. However, there was also another perception that investigations are conducted to attribute blame. This view appeared to relate mainly to dropped object risks. People equated any dropped objects event with a 'trip to Houston' and a discipline case. This perception will inevitably result in under reporting, which will mean that learning from such incidents will be lost, as well as opportunities to create further prevention and mitigation measures.

It was clear that the LTI metric was important to the crews on Deepwater Horizon as a measure of safety performance. People tended to refer to the rig safety performance in terms of LTIs rather than TRIR. This was seen as a realistic and tangible parameter to enable the workforce to understand and measure their safety performance. Most importantly, the rig's excellent LTI safety performance was a key driver in raising awareness and promoting safe behaviours. This focus, although commendable, could distract attention away from other key considerations, including potential risk severity and subtleties of change.

On protracted or unfamiliar tasks, a planned TOFS was often scheduled to enable the crews to review task progress, changes and hazards. As such, many of the participants recognised the value of the planned TOFS when used as a monitoring tool.

There were negative perceptions around the use of START as a monitoring and improvement tool. Although most of the workforce believed that this was a useful process, many resented the 'one a day' rule, and invented cards in order to achieve 'compliance'. Many participants also stated that they would only record positive behaviours or negative conditions (i.e. they did not record negative behaviours). As a result, there is a lack of belief in the accuracy and usefulness of START data. False data also distorts monitoring assessments used to identify rig specific safety issues and trends.

Safety meetings throughout the rig tended to focus on the quantity of cards rather than the quality of the content.

There was another common perception that there were too many audits (including PMAAs), with an estimated 26 planned audits for 2010. No one doubted that these could potentially help the rig improve its safety performance. However, people felt that the time spent preparing for the audits, and dealing with corrective actions, greatly reduced the time available for mentoring, coaching and supervising. It was also felt that some action points were 'nit picking' and could be resolved immediately rather than by applying the report action process. Furthermore, participants found it frustrating to have to undergo audits of similar scope and boundary from different organisations (e.g. BP and Transocean). It was felt that the audit process could be made much more efficient by combining audits, where appropriate.

Strengths:
- Many people identified that the core purpose of the investigation was to identify the root causes and find safer ways of working.
- LTI metric was important to the crews on Deepwater Horizon as a measure of safety performance.
- The concepts behind START were seen as positive.
- People recognised the potential value of audits.

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- The workforce liked using planned TOFS to monitor protracted or unfamiliar tasks.

Significant comments that illustrate these findings:

There was no pressure on him to lower the TRIR rate or severity rating (relating to medical treatment cases): "the TRIR is accurate."
PMAAs: "useful but dependent on the quality of assessors ... they need to look at the big picture and not nit-pick."

START: "keeps people's focus on safety and being safe."

Weaknesses:

- People felt that dropped objects investigations were conducted to attribute blame. They equated any dropped objects event with a 'trip to Houston' and a discipline case.
- Many of the participants felt that the time spent preparing for the audits, and dealing with corrective actions, greatly reduced the time available for mentoring, coaching and supervising. The 'nit picking' nature of some findings decreased the perceived value of the audits. It was felt that there were too many audits and that there is the opportunity to combine and streamline audits of similar scope and nature.
- There was a lack of buy-in to the 'one a day' START card rule. This meant that many people invented cards, resulting in false data, inaccurate monitoring and a devalued process

Significant comments that illustrate these findings:

"there is an unending line of audits (i.e. from BP, Transocean, Regulatory, and third parties) using up valuable time and resources ... it's got good intentions but it is overwhelming."

"PMAA monitoring, evaluation and audits are there to grade you, not help you."

"People will report near-hits because they are worried in case people find out (they haven't reported them)."

"Some people do worry about reporting because of blame ... getting pounded on by Houston, not the rig."

START cards: "sometimes they can be a little hesitant because they don't like to tattle-tail ... people don't always react well to others highlighting their bad behaviours."

The participant felt that there was a lot fear of reporting regarding dropped objects. "You ask yourself: what's gonna come of me if I reported a dropped object that I could do nothing about during my tour?"

Element reviewed: Trust (blame – just culture)	
Method of review: Focus groups and individual interviews.	Review category: Involving

Perception data:

Results from the perception survey indicated that there were differing perceptions in relation to blame (just culture) on the rig. A number of the participants (46.3%) felt that, if their actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), they could report this without any fear of reprisal. However, 24.4% of those interviewed felt that the purpose of incident investigations was to determine who is to blame and should be disciplined.

Assessment output/evaluation:

These rather negative perception results related to the reporting of dropped objects and the stated fear of reprisal. As previously mentioned under Employee Influence, people felt that dropped object reporting equated to 'a trip to Houston' and a discipline case. It was clear that fear was stronger amongst the frontline workforce and some supervisors. This fear was seen to be driven by decisions made in Houston, rather than those made by rig based leaders. As a result of this, some of the workforce may be hesitant to engage in tasks which may have the potential for a dropped object incident.

Apart from the dropped objects issue, trust was very good on the rig. There was no evidence of any fear of reporting injuries or near-hits (non-dropped objects). Trust within teams and between departments was generally very good. This included trust in Supervisors, rig based management and the Rig Managers at Division. As previously mentioned in Leadership, much of the workforce appreciated the policy clarity introduced by the Performance Manager's 'Back to Basics' initiative. Many people felt that if procedures were followed then management would support them, and this perception facilitates a strong safety culture.

The strong team culture onboard Deepwater Horizon and the levels of mutual trust evident between crews means that the rig safety culture was deemed to be robust, largely fair, and inclusive, and was contributing to a 'just culture.'

Strengths:

- Excellent team trust and trust in rig based leadership up to the Rig Manager level.
- People indicated a willingness to report incidents, injuries and near-hit reporting (excluding dropped objects).
- It was clear to participants that if policy was followed then they would receive management backing, providing a cornerstone for a strong safety culture.

Significant comments that illustrate these findings:

"I don't think Division will run anyone off for following policy."

"People won't report near-hits for fear of potential repercussions. This is not just a fear, it is an unfounded fear. The Rig Manager made it clear that, if you felt you were doing the right thing ... doing all you could and something happens, then you will not lose your job."

No fear of reprisal if crews are meeting policies: "if it's a genuine mistake, and not against policy then yes, they're treated fairly."

"People set aside their differences and look out for each other ... we're doing it for each other."

"We take care of the rig ... and each other."

Weaknesses:

- There was a clear fear of repercussions for dropped object incidents.
- Dropped object investigations were often equated with apportion of blame and a 'trip to Houston'.

Significant comments that illustrate these findings:

"I'm petrified of dropping anything from heights, not because I'm afraid of hurting anyone (the area is barriered off), but because I'm afraid of getting fired."

"You drop an object and you're going to Houston."

If they could change one thing to improve safety: "lay off on us ... everyone's so stressed and so wound up."

"The company is always using fear tactics, a little comment here a little comment there. All these games and your mind gets tired. There's so much to think about that you worry about your job ... not THE job."

Investigations: blame versus learning? "They say they don't, but they do look for a fall guy in investigations."

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Observation data

The purpose of this section is to summarise the review teams' observations in relation to the meetings attended and activities observed over the duration of the visit to Deepwater Horizon.

The team attended a number of meetings and conducted observations over the five day visit.

Observation summary:

General platform alarm drill and abandon platform (Observation No 1 - drill)

The weekly drill scenario changes from week to week. This week's drill was based on a fire in the No. 6 pontoon. One assessor observed the fire drill team in the No. 6 pontoon and the other assessor observed incident command operations from the bridge. Bridge based observations included:

- Shutdown and well isolation done by the Maintenance Supervisor/Chief Engineer.
- Muster Captains delivered various muster rolls from muster points (including alternative).
- Mustered roll-call were confirmed via radio communications by the Coxswains/Lifeboat Muster Captains to the Radio Operator on the Bridge.
- Calm and controlled operations throughout the drill.
- Muster for both the GPA and Abandon Platform was completed in less than 10 minutes.
- There were some problems with understanding Coxswains over the radios because of the wind and the microphone position, and the Radio Operator was required to re-confirm roll-call numbers.
- There were four BP third party contractors that did not participate in the drill (and it was unclear why they were excused). The excused third parties included ROV operators and a well control specialist.

General platform alarm drill and abandon platform (Observation No. 2 - drill)

Fire team observation (drill)

The reviewer observed the fire team during the weekly drill.

- The fire crew first had to get to the location of the fire, which they did in an orderly and controlled fashion.
- The Chief Mate led the group through the types of things to check e.g. hot doors, ventilation shafts, how the smoke would disperse from the fire, what alternative extinguishers and access points there were to the fires.

As an observation, it would have been a better approach for the team to explain how they would deal with the fire, with the Chief Mate questioning and guiding when appropriate. This would have allowed the Chief Mate to get a better understanding of the level of knowledge within the response team.

Weekly safety meeting – general rig

Attendance at this was approximately 30 people, all of whom were off-tour. A further safety meeting was to be conducted with the on-tour crews. The meeting was led by the RSTC and was attended by the Senior Toolpusher and Captain. The OIM was not present due to well control issues but it was explained to the reviewers that he normally participates at these meetings. Client representatives were not in attendance. The main observations noted during the meeting were:

- Two recent crane incidents (non-recordable, operational) were briefly discussed.
- The safety material presented was heavily biased towards statistics (TRIR, FACs, incidents).
- START card feedback focused on quantity of cards rather than the quality of the content. There were no START statistics or trends presented, to enable crews to understand what their cards were telling them.

- There was a session that clarified the Self Retracting Line procedure within the H&S Manual.
- A significant proportion of the meeting was taken up by subject matter deemed by the reviewers to be inappropriate for safety meetings (e.g. hotel reservations, flights, and travel issues associated with training courses). The reviewers felt this undermined the importance and usefulness of the meeting.
- There was a low degree of participation from the crews, potentially due to a lack of interest in statistics.

As an observation, much more value could be gained from this meeting if more attention was paid to engaging attendees in discussions that related directly to their safety and their interests.

Weekly safety meeting – third party service hands

This meeting was led and attended by BP's third party contractors. Observations included:

- A Safety Alert relating to an incident involving another Operator was discussed.
- There was a discussion surrounding any new safety concerns that people raised, and any outstanding issues from previous meetings (including close-outs).
- START cards were discussed, however the focus of the discussion revolved around the numbers of cards raised rather than the content within the cards. The third party contractors number more than 10% of the POB; however, the number of START cards raised by third party contractors did not reflect this.
- The reviewers felt that this meeting was being conducted because it was compulsory, rather than because of an intrinsic belief that this time could be used to learn and improve safety on the rig.

OIM's daily Supervisors' meeting

This meeting is used to discuss the day's events and inform Supervisors/Department Heads of operational matters. Attendees included the OIM, Maintenance Supervisors, RSTC, Captain, Warehouse man, Chief Mate and Senior Toolpusher.

The participants took turns to update others on relevant operational matters, and the OIM and other participants sought clarification and further understanding, where appropriate. The OIM interjected to confirm understanding and check that critical communications relating to policies and control measures had been sent and received.

The safety element of the meeting focused on a number of submitted START cards, and the content of few cards were discussed. The RSTC recorded that 105 START cards, 78 PROMPT cards and 21 TOFS had been submitted or conducted.

Overall, this was a good meeting, the content of which was clear and detailed and, when necessary, all participants were involved. The OIM did dominate, not in an aggressive manner, but asked some excellent questions to ensure understanding, in particular of safety related matters.

Weekly safety meeting – Maintenance Department

The weekly safety meeting for the Maintenance Department was well attended and led by the Supervisors. Issues discussed included:

- Safety Alerts.
- Recent crushed foot incident on Marianas' supply boat.
- Work and safety expectations.
- Format of future departmental safety meetings (it is the intention for each weekly meeting to be led by a different member of the team).
- Rig condition assessment in preparation for the upcoming shipyard modifications. They had a very positive perspective on the modifications, eager to carry out evasive PM routines that they normally could not do.

As a group, they had an excellent discussion about rigging up a trolley or a winch system to enable them to lift pumps and agitators to specific areas and levels within the rig.

Overall it was an excellent meeting. It is clear that this team is accustomed to open and frank discussion. Their inclusive communication approach meant that the meeting was never dominated by individuals and even junior crew members were empowered to openly express their opinions. From the discussions, it was also clear that planning is very much at the core of their approach to safety.

THINK plan development and pre-job safety meeting: engine de-isolation

The THINK Plan for this job was written by the Mechanic and the Chief Mechanic. Because Engine No 5 is considered a critical system, de-isolation requires a PTW (as completed by the Mechanic). Hazards identified on both the THINK Plan and the PTW included:

- Pinch points from valves.
- High pressure air release from compression chambers.
- High noise levels.
- Lubricant leaks.

Controls were adequately defined and the bridge was fully aware of isolation and de-isolation status, both prior to operations when the PTW was delivered to the bridge, and during operations when the team called the bridge from the engine room. Communications between the Mechanic and Chief Mechanic were excellent and it was clear that the Chief Mechanic was letting the Mechanic run with this as a coaching and learning opportunity. Engine pressure and overall performance was monitored when the engine was re-started and found to be acceptable.

THINK Plan development and pre-job safety meeting: heavy lift drill pipe from the conveyor

The THINK Plan for this job was developed by the Driller and AD, and included the PTW and TSTP. The pre-job safety meeting took place in the Doghouse. Appropriate descriptions of hazards were identified on the THINK Plan but, more importantly, details were highlighted by one of the Floor Hands during the pre-job safety meeting. The pre-job safety meeting was attended by the lifting crew (Crane Operator and Roustabouts/Banksman), the Driller, the AD, the on-crew Floor Hands, Weatherford third party, and the RSTC. Observations include:

- The Floor Hand read through the TSTP tasks, highlighting hazards and controls and making it clear who was responsible for individual tasks.
- The Driller clarified everyone's understanding of the tasks, hazards and controls and task responsibilities.
- There was a round-the-houses session where each person taking part in the task highlighted what they were doing, and their understanding of the hazards and required controls.
- The Driller stressed "take your time" so that they can get it right and keep it safe.

It was noted that the Derrickman missed part of the pre-job safety meeting, but he was given an opportunity to review the TSTP and written Think Plan, and then he had a one-on-one session with the Driller before he took to the floor to commence start-up operations. The Driller did a dummy run of lifting operations, just to check that equipment was operating smoothly, and that Floor Hands understood what they had to do and when.
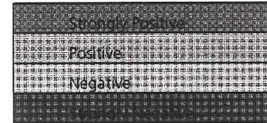
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Appendix 1 – Perception survey results

Table 2. Perception survey results for Deepwater Horizon

Q #	Questions		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I do **not** get all the information I need to do my job safely and keep myself and others safe.	COM		29.3%	9.8%	
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		2.4%	51.2%	
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA		46.3%	7.3%	
4	There are always enough people to carry out work safely.	RRR		14.6%	65.9%	
5	Some rules and procedures are difficult to understand and complicated. so I don't always follow them.	SPP		51.2%	12.2%	
6	My line manager listens and acts on my safety concerns.	COM		2.4%	73.2%	
7	The sharing of lessons learnt from START. TOFS. audit. near hits and incident investigations helps me to prevent incidents from happening again.	MON		9.8%	51.2%	
8	I participate in the changes to working practices that affect me.	MoC		2.4%	61.0%	
9	I am **not** always informed of the outcome of changes that affect me.	MoC		46.3%	31.7%	
10	There are too many steps in place to manage risks.	PRM		48.8%	34.1%	
11	Tasks are **not** always adequately planned before we start work.	PRM		36.6%	24.4%	
12	Because of the training and support I have received I fully understand the safety procedures and hazards associated with my job.	TRA		0.0%	53.7%	
13	There are **not** sufficient resources (equipment & money) for me to carry out my job. identify and manage risks safely.	RRR		45.0%	10.0%	
14	I do **not** have enough time to do my job according to rules & procedures.	RRR		48.8%	9.8%	
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		5.0%	67.5%	
16	Transocean rewards me when I carry out my work safely.	LEA		25.0%	62.5%	
17	**Not** all incidents are reported. investigated and followed-up.	MON		43.9%	24.4%	
18	If my actions led to a potentially risky situation (e.g. forgetting to do something. damaging equipment. dropping an object from height). I feel I could report this without any fear of reprisal.	TRU		41.5%	34.1%	
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP		39.0%	4.9%	
20	I do **not** get to hear about. or participate in. safety improvement initiatives.	EMP		56.1%	7.3%	
21	The purpose of incident investigations is to determine who is to blame and should be disciplined.	TRU		41.5%	17.1%	
22	All the changes in the company i.e. mergers have **negatively** impacted our safety performance.	MoC		56.4%	28.2%	
Rig specific questions						
23	I often see THINK plan **not** being properly carried out by others on the rig.	RIG		51.2%	19.5%	
24	Some of the workforce are uncomfortable with calling a TOFS when unsafe situations occur.	RIG		39.0%	41.5%	
25	I often see unsafe behaviour on the rig.	RIG		63.4%	14.6%	

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RRR	Resources, roles and responsibilities
TRA	H&S training and competence
PRM	Planning and risk assessment
MoC	Management of change
SPP	Strategies, policies and procedures
LEA	Leadership
COM	2-Way communication (internal and external)
EMP	Employee influence
TRU	Trust (blame – just culture)
RIG	Rig specific questions

Strongly Positive
Positive
Negative

Appendix D - Discoverer Clear Leader summary report

Lloyd's Register

CONSULTING SERVICES
LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

Client:	Transocean
Project:	Safety Management and Safety Culture/Climate Reviews
Location:	North America Division
Asset:	Discoverer Clear Leader
Date of assessment:	16th to 22nd March 2010
Team:	4

Project number: ABN0991642/006   1
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Technical Report Document Page

Report No.	Report Date	Revision Date	Type of Report
ABN0991642/006.003	26 May 2010		Issue

Title & Subtitle	Security classification of this report
Transocean Safety Management and Safety Culture/Climate Review – Discoverer Clear Leader	Restricted to client and Lloyd's Register EMEA

Prepared	Checked
Barnaby Annan	Paul Harrison
Signature	Signature

Authorised	
Nick Jackson	

Reporting Organisation Name & address	Reporting organisation reference(s)
Lloyd's Register EMEA Consulting Services Department Denburn House 25 Union Terrace Aberdeen, AB10 1NN	

Sponsoring organisation name & address	Sponsoring organisation reference(s)
Transocean	

Summary	
Individual rig report relating to Lloyd's Register Safety Management, Safety Culture, Safety Climate Reviews of Transocean operations.	

Key words	Distribution
	Divisional Managing Directors General Managers Adrian Rose (Houston)

Report glossary

AD	Assistant Driller
BOP	Blow Out Preventer
BP	British Petroleum
CAKES	Comply, Authority, Knowledge, Experience, Skills
CMS	Company Management System
CP	Competent Person
CYA	Cover Your A**
DAFWC	Days Away from Work Case
FAC	First Aid Case
FOCUS	Formulate, Organise, Communicate, Undertake, Summarise
FR	Fire Retardant
GSF	GlobalSantaFe
H&S	Health and Safety
HSE	Health, Safety and Environmental
ICS	Inventory Control System
IT	Information Technology
JSA	Job Safety Analysis
LTI	Lost Time Incident
MoC	Management of Change
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OJT	On the Job Training
PA	Performing Authority
PMAA	Performance Monitoring, Audit & Assessment
POB	Persons on Board
PPE	Personal Protective Equipment
PTW	Permit to Work
RMP	Rig Manager Performance
RMS	Rig Maintenance System
RSTC	Rig Safety Training Coordinator
RSTT	Rig Safety Training Technician/Trainee
SLF	Safety Leadership Foundation
SLT	Safety Leadership Training
SMS	Safety Management System
START	See, Think, Act, Reinforce, Track
THINK Plans	The Company Planning Process
TOFS	Time Out for Safety
TOPS School	Pre-rig Orientation Training
TRA	Task Risk Assessment
TRIR	Total Recordable Incident Rate
TSTP	Task Specific THINK Procedure

Appendix glossary

COM	2-Way Communication (internal and external)
EMP	Employee Influence
LEA	Leadership
PRM	Planning and Risk Assessment
RIG	Rig Specific Questions
RRR	Resources, Roles and Responsibilities
SPP	Strategies, Policies and Procedures
TRA	H&S Training and Competence
TRU	Trust (blame – just culture)

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Prepared by: Barnaby Annan   Lloyd's Register EMEA

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Executive summary

Introduction

On the 16th to the 22nd of March 2010, a team from Lloyd's Register EMEA (Barnaby Annan, Paul Harrison and Kathryn Melia) visited the Transocean drilling rig, Discoverer Clear Leader, to conduct a review of the company Safety Management System, safety culture and safety climate.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the Safety Management System (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following this more detailed scrutiny of the data.

Summary of results

The results of the maturity assessment and perception survey are summarised below and include:

1. Classification of industry recognised Safety Management System elements against maturity index criteria.

2. Key strengths and weaknesses identified.

3. Key findings from the perception survey.

1. Classification of Management System elements against maturity index criteria

Table 1 below summarises the LR EMEA reviewers' ratings of the safety culture on board the rig. The LR EMEA reviewers' ratings are a reflection of the interviewees' views of the organisation; these were then averaged to give the initial assessor rating. The five point maturity scale has the following categories:

1. Emerging (lowest category).

2. Managing.

3. Involving.

4. Cooperating.

5. Continuously improving (highest category).

Table 1. Maturity ratings

Element	Rating	Classification
Resources, roles and responsibilities.	2.9	Involving
H&S training and competence.	2.3	Managing
Planning and risk assessment.	2.5	Involving
Management of change.	1.9	Managing
Strategies, policies and procedures.	2.6	Involving
Leadership.	2.9	Involving
2-Way communications (internal and external).	2.3	Managing
Employee influence.	2.6	Involving
Monitoring, evaluation and improvement (learning culture).	2.4	Managing
Trust (blame – just culture).	2.5	Involving

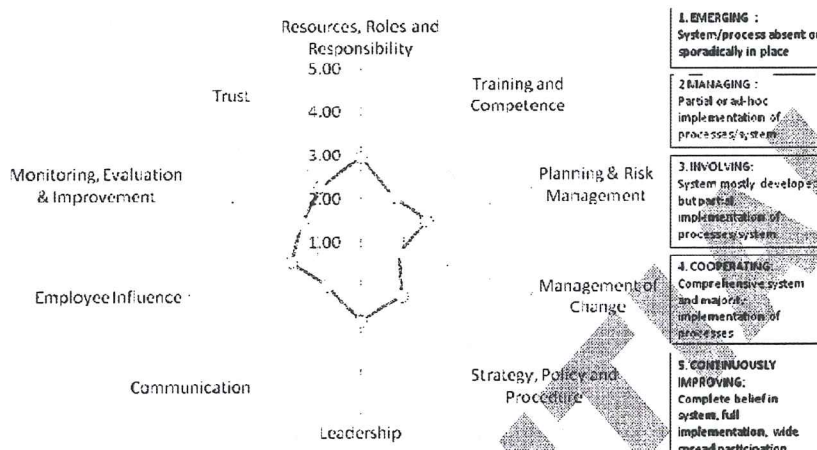Project number: ABN0991642/006   5
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The data is also presented in the form of a spider chart (see Figure 1 below).

Figure 1. Spider chart of maturity categories

2. Key strengths and weaknesses

Overall, the Discoverer Clear Leader had a number of strengths in relation to leadership and safety culture on the rig.

The areas that the LR EMEA reviewers evaluated as the strongest were 'resources, roles and responsibilities' and 'leadership'. In relation to the first of these, it was clear that the majority of workforce had a good understanding of their roles and responsibilities when it came to safety management. The majority of employees accepted responsibility for their own safety and thought that the support offered by HSE personnel was perceived to be adequate for the implementation of the safety vision. The resources they have available to them are generally believed to be adequate for the majority of operational circumstances and very few personnel felt under time pressure that would cause a safety concern. The relationship between Transocean and Chevron was also complimented by the crews.

It was clear that strong leadership from rig management had had a significant impact on the management of safety on this rig. Leadership on the rig by the OIM and supervisory team was praised by many personnel. They are seen to send out a consistent safety message and are perceived to try to get outside on the rig whenever they can. This applied to rig leadership from both Transocean and Chevron.

The general effort that Transocean puts into the management of safety was seen as positive and a demonstration of the organisation's commitment to safety. Some personnel highlighted the recent events where operations on the rig were stopped and shut down as a result of dropped objects in the derrick (mast). Operations were suspended in order to conduct a full review of the design and build of the derrick. This was seen by some as good leadership from Transocean, demonstrating that they prioritise safety over operational performance.

The areas that exhibited the most concern in relation to safety were 'management of change', 'training and competence' and '2-Way communication'.

One of the most significant risks faced by the Discoverer Clear Leader is the ability of some personnel to adequately identify hazards. The Discoverer Clear Leader is an advanced drilling ship, utilising

some more advanced technology, particularly in the more automated drilling functionality. The hazards that personnel are in contact with on a daily basis have become more complicated, and sometimes more difficult to identify and understand.

Essentially, competence in hazard identification, risk assessment and control was the area of concern. This concern was primarily identified by personnel at Supervisor level and above. Personnel on the front line generally felt competent, which can be explained by the fact that they "don't know what they don't know" and Supervisors and senior rig management recognised this. It is essential that the levels of hazard awareness in frontline crew members are enhanced to enable Discoverer Clear Leader to achieve its safety goals.

The general perception on the rig was that Transocean is not effective when managing changes. The changes being referred to relate to equipment, processes and organisation change. There were numerous concerns:

- Number and frequency of changes – there is a general feeling that the workforce is not able to keep up with the number of changes being demanded of them.

- Communication – very rarely do personnel feel like they receive all the relevant reasoning behind any change from the people making the change decisions (i.e. personnel in the Divisional and Corporate offices). There is a perceived lack of communication to fully brief personnel on the new requirements that will be expected from them.

- Suitability of change – it is widely believed that the impact of these changes introduced at rig level is not fully appreciated by onshore leadership. There were several examples where personnel believed that some changes had introduced more hazards than they had eliminated.

Competency assessment was noted as an area which was perceived to be lacking in some aspects. Competency is measured against the "On-the-Job Training" (OJT) training matrix. However, this is limited to technical capability and does not address the softer skills such as communication, mentoring or leadership. Several personnel believed that some Supervisors lacked the leadership and communication skills to fully facilitate their teams to 'buy in' and believe in the safety system.

Several concerns were noted on the effectiveness of certain aspects of the training content, and the preparation it provided to personnel to effectively apply the safety management system processes.

A significant number of personnel noted that communications seemed to be predominantly top down (with a few exceptions). They felt that they had limited opportunity to comment on proposed changes and raise safety concerns at a higher level (e.g. at Divisional or Corporate level). Most situations where communication occurs between rig and beach are perceived to be in a negative context (e.g. during an incident, to address poor safety performance etc.). Many personnel felt that a better balance between positive and negative communication would facilitate the relationship.

Several personnel (normally at rig management level) stated that the number of communications were very high at times (particularly email communications), which was creating a significant workload for them. It was noted that some of these communications are duplicated by different parties in the Divisional/Corporate office.

There was also a significant perception of a blame culture which resided at all levels, and within all teams, on the rig. This perception of blame mainly relates to accident/incident reporting and the associated fear of discipline. This was influencing many behaviours associated with the safety management processes, many of them with negative connotations.

3. Key findings from the perception survey

Seven of the twenty-five questions in the perception questionnaire failed to reach 80% positive agreement. Of these, the three weakest areas were:

- 46.7% feel that Transocean rewards them for carrying out their work safely (Q. 16).

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- 53.3% feel that the purpose of incident investigations is to determine who is to blame (Q. 21).

- 57.4% report that some of the workforce is uncomfortable with calling a TOFS when an unsafe situation occurs (Q. 24).

Nine of the twenty-five questions in the perception questionnaire exceeded 90% positive agreement, with five of the twenty-five questions exceeding 95% positive agreement. These five related to:

- 100% of the participants surveyed felt that they were encouraged to raise ideas and suggest safer ways to do things at work (Q. 2).

- 98.4% felt like they participated in changes that affect them (Q. 8*).

- 98.3% reported that they think management considers safety is more important than operational performance (Q. 3).

- 96.7% stated that they think their line manager acts on their safety concerns (Q. 6).

- 95.1% stated that the training and support they have received enables them to fully understand the safety procedures and hazards associated with my job (Q. 12**).

* The results of Q. 8 have to be treated with caution as several personnel interpreted this question as if they were being asked if they experienced changes in the workplace.

** The results of Q.12 also have to be treated with caution as self evaluation is not a reliable way to measure hazard awareness (i.e. "you don't know what you don't know").

Figure 2. Perception survey results for Discoverer Clear Leader represented as a bar chart
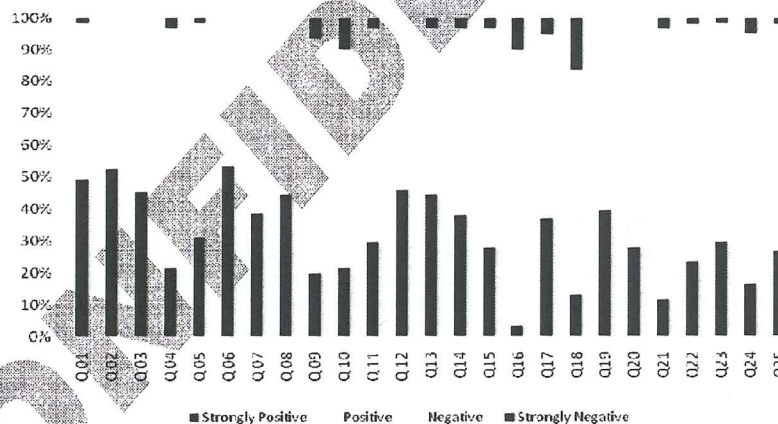
A table of the questions and crew responses survey data can be found in Appendix 1 to this report. Further analysis of the Discoverer Clear Leader survey data will be undertaken when it is incorporated into the North American dataset.

Introduction

On the 16th to the 22nd of March 2010, a team from Lloyd's Register EMEA (Barnaby Annan, Paul Harrison and Kathryn Melia) visited the Transocean drilling rig, Discoverer Clear Leader, to conduct a review of the company Safety Management System, safety culture and safety climate.

Rig background

Type: drill ship.
POB: 200.
Client: Chevron.
Other: the ship was completed in 2009 and had been in operation for approximately eight months. At the time of the visit, operations were centred around a well completion. There had been a few notable safety related incidents on the rig during its relatively short operational period.

- A fire broke out which disabled the thrusters that kept the rig in position. The power was restored in time, which prevented the rig becoming disconnected from the well.

- Four people were involved in an incident involving the lifeboat, during which the boat was released prior to being in the water. This caused it to fall several feet, causing injuries.

- There were dropped object incidents in the derrick (mast) which were thought to be caused by design/build issues. Operations were suspended in order for a full investigation to be carried out.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the system (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

The offshore review concluded with a close-out meeting on board the rig which summarised the review findings without detailed scrutiny of the data produced. This close-out was followed by a further close-out meeting in Division again without reference to detailed data. Detailed analysis of review data will be developed and included in the final report.

Methodology and criteria

The assessment was carried out using a series of interviews, focus groups and site/activity observations where implementation of the Safety Management System was assessed using the Lloyd's Register maturity index. This was explained at the opening meeting on board the rig where the assessment scope, criteria and programme was confirmed, confidentiality assured and the reporting mechanism explained.

Areas selected for an appraisal of the climate and maturity of the Safety Management System and its implementation are listed below:

- Resources, roles and responsibilities.
- H&S training and competence.
- Planning and risk assessment.
- Management of Change.
- Strategies, policies and procedures.
- Leadership.
- 2-Way communications (internal and external).
- Employee influence.

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- Monitoring, evaluation and improvement (learning culture).
- Trust (blame – just culture).

Personnel, operational areas and processes sampled

Focus groups and interviews carried out over the assessment period are listed as follows:

- Numbers assessed = 59.
- Percentage of POB = 34%.
- 19 formal interviews of rig/regional team members.
- 8 focus groups involving a total of 40 people.

Operational areas and processes sampled during the assessment are summarised as follows:

- Drilling and support functions.
- Maintenance.
- Electrical.
- Transocean contractors (catering).
- Client contractor (Schlumberger).
- Client third party.

Meetings and discussions:

- Daily meetings (pre-tour and morning meeting with company man).
- START observations (START tour with company man).
- THINK Plan observations (days 30-60 sample from drill crew).
- Emergency Response Drill (observed from control point on the bridge).
- Informal observation of operational activities (e.g. drill floor, crane lifting operations – from supply boat and around deck).

Please note that this report refers to various categories of rig based workforce who were interviewed as part of the review process. They included:

- Management (OIM's, Senior Toolpushers etc.).
- Supervisors (maintenance, drillers, RSTCs etc.).
- Front line crews.
- Third party contractors (Transocean and client).

Presentation of rig specific results

Output from the assessment processes is presented in the assessment tables:

Element reviewed: Resources, roles and responsibilities	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Overall, 83.6% of the workforce agreed they always had enough people to carry out the work safely. 93.4% also felt they had enough equipment and financial resources to manage risks. Likewise, 91.8% of the workforce felt they had enough time to do their jobs safely. These results indicate that the majority of personnel felt that resourcing was sufficient with regard to safety.

Assessment output/evaluation:

The majority of personnel felt that there were sufficient resources available to support the safety processes. This perception related to both personnel in an HSE capacity (Corporate, Divisional and rig based), and personnel undertaking operations on the rig. However, there was reported under-resourcing in the Maintenance Department. This was thought to be influenced by the following factors:

- The rig is in the infancy stage of its life and the maintenance requirements and, hence, maintenance personnel numbers required are still being determined.

- Maintenance tasks are being developed using the manuals provided by the equipment manufacturers. This is taking a significant portion of time which has not been allowed for.

- There is a lack of TSTPs for certain maintenance tasks and they are still being developed. Therefore, written THINK Plans are required for these tasks which take significantly more time to construct when there is no defined TSTP.

The majority of Supervisors, especially senior Supervisors offshore, felt that their workload was very high. A significant proportion of time was spent in the office performing paper exercises and dealing with e-mail correspondence. They believed that this was preventing them from being outside on deck with their teams, coaching them, mentoring them and supervising them. This was a significant concern, as frontline personnel were not fully benefiting from the passing on of experience from the Supervisors. It was often reported that a significant amount of work was being created by requests from the beach, many of which could have been accomplished by sourcing the information via other sources.

The majority of employees felt responsible for their own safety. This applied to all personnel the LR EMEA review team spoke to, including Chevron personnel, and third party contractors to Transocean and Chevron. The relationship between Chevron and Transocean was well aligned regarding their approach to safety, the emphasis they placed on it and their embracement of Transocean policies.

There was a high level of concern expressed by Supervisors and above regarding the quality of personnel sent to the rig to fulfil junior positions. They felt that there were a number of people that did not have the right attitudes or ability to work in an offshore environment. Therefore, they felt no amount of training and experience would completely solve the issue. It was noted that, whilst they could have some involvement in the selection of personnel for positions of Supervisor and above, they had very little contact or influence regarding personnel being selected for more junior positions. They felt frustrated with the process of removing personnel that fell into this category as, in their minds, they already knew they would not ever be considered competent, but would have to follow a lengthy HR training/discipline process. This exposed the workforce to a higher risk during the period they were still on the rig.

There was concern over the level of personnel experience within some frontline teams on the rig. It was noted that this will always be an issue on new rigs; nevertheless, the risks were still present. This situation had improved over the last few months but senior Supervisors were now worried about personnel with experience leaving the rig. They put this down to a number of factors:

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- Personnel being involved in the shipyard during the build period. They liked this style of work and were seeking further opportunity to do this again.

- High workload for some personnel in senior positions causing low morale.

Strengths:
- Resources reported to be generally available for the majority of operational circumstances (at least in terms of quantity).
- Support provided by HSE personnel perceived to be adequate for implementation of the safety vision.
- Majority of employees accept responsibility for their own safety.
- Complimentary relationship between Transocean and Chevron.

Significant comment that illustrates these findings:

Client relationship: "Chevron system doesn't add to much extra … sometimes there is slightly more to do but it is manageable."

Weaknesses:
- Supervisor workload perceived to be extremely high, resulting from constant requests from the beach on top of the day-to-day job responsibilities.
- Perception of inappropriate personnel being sent to the rig from the beach and perceived lack of involvement/communication with the HR Department.
- Concern over personnel experience levels in some cases.
- Concern over loss of experienced personnel.
- The relatively poor state of readiness for operation has caused additional maintenance workload.
- Maintenance TSTPs are still work in progress.

Significant comments that illustrate these findings:

Supervisor workload: "These guys have more on their plate than they need."

"Killing us with e-mails."

Recruitment: "(A) lot of people lack common sense."

"Management hands on the rig are tied … if we see a problem with a guy, we cannot control it ourselves."

"Attitude is super important … more so than competency."

Element reviewed: Training and competence	
Method of review: Focus groups, individual interviews.	Review category: Managing

Perception data:
Results from the perception survey suggested that 95.1% of participants felt the training and support they had received gave them a full understanding of safety procedures and the hazards associated with their tasks. Similarly, 88.5% of participants felt that they had to demonstrate they could do their jobs safely before being considered competent.

Assessment output/evaluation:
There was positive feedback on the level of attention that Transocean places on their training programmes. Generally, personnel perceived Transocean's approach and emphasis on training as class leading. There were positive responses to the fact that many people perceive that Transocean is prepared to provide any relevant training required, if it is identified as a need.

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Competency assessment was noted as an area which was perceived to be lacking in some aspects. Competency is measured against the "On-the-Job Training" (OJT) matrix, however, this is limited to technical capability and does not address the softer skills such as communication, mentoring or leadership. These are left up to the judgement of the line manager and it is felt that they can receive (wrongly or prematurely) promotion due simply to time served. Therefore, the promotion process is perceived to be subject to variation and poor judgement.

Several personnel believed that some Supervisors lacked the leadership and communication skills to really facilitate their teams to 'buy in' and believe in the safety system.

Competence in hazard identification, risk assessment and control was an area of concern. This concern was primarily identified by personnel at Supervisor level and above. Personnel on the frontline generally felt competent, which can be explained by the fact that they "don't know what they don't know" and Supervisors and senior rig management recognised this. The drill ship is a complex operation which means that hazards are difficult to identify and understand, but it is essential that the levels of hazard awareness in frontline crew members is enhanced to enable Discoverer Clear Leader to achieve its safety goals.

In one example, a member of personnel in the Maintenance Department reportedly resorted to using the equipment manuals for the equipment in an attempt to identify the hazards. He was forced to do this as he had not had training with regard to any relevant hazards with the equipment. However, he mentioned other people (who are not as conscientious) who just went straight into the task, which was perceived to be a high risk approach.

Several concerns were noted on the effectiveness of certain aspects of the training content, and the preparation it provided to personnel to effectively apply the Safety Management System processes. The following points were captured:

- The effectiveness of the TOPS training course (which is provided to new starters in preparation for an offshore environment) is perceived to have reduced in quality. Some personnel believed that the course used to offer a better preparation experience through practical training, as opposed to a classroom based approach which applies today.

- The process of training new people on the rig equipment and operating/maintenance processes is not as effective as it should be. Personnel reported felt bombarded with training at the start and hence were not able to remember all the information, which left them feeling unprepared for some of the key tasks they had to perform. This applied equally to crew members joining from other Transocean rigs, and new hires.

- Some of the training courses on the beach do not offer real value as large parts of the programmes are irrelevant to the tasks being performed on this rig.

- The training on the THINK process focuses on how to write an effective THINK Plan, however, it was reported to not provide sufficient content on how to carry out that plan in an effective way (i.e. communications, how to observe as a team lead, how to delegate tasks appropriately, spot changing conditions, detect emerging risks etc.).

The buddy system was generally acknowledged as being a good system to transfer experience to more junior crew members. However, the system was only as effective as the selected mentor. With a relatively inexperienced crew, it was sometimes necessary to select a less than suitable candidate to fill this role.

It was generally felt that there was a low average experience level in frontline crew members on the rig (with exception of the senior supervisory level). One quoted figure was that the average experience level across all personnel on the rig was eighteen months. It was not clear whether this figure related to total experience in the industry or rig specific experience, however it was clear that personnel felt the 'experience factor' exposed them to a higher risk than other rigs.

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Strengths:

- Transocean is good at allowing personnel to attend the various training courses.
- Positive feedback on the buddy system overall.

Significant comments that illustrate these findings:

Training provision: "Any training we want, we can ask to go on."

"I've never been turned down for training."

"Once it's on your matrix, you are on it (the course)."

Weaknesses:

- Lack of Supervisor leadership skills can reduce the effectiveness of safety management.
- Competency assessment is, in part, subjective (based on personnel opinion), at the expense of clearly defined and assessed competency criteria.
- Hazard identification noted to be an issue.
- Concern over the effectiveness of the training received by new personnel prior to starting on the rig via the TOPS Training School.
- THINK training content lacks focus on carrying out an effectively written plan.
- Training delivery for new rig equipment and processes ineffective and no follow-up.
- Onshore training not always matched to the tasks personnel are required to perform offshore.

Significant comments that illustrate these findings:

Hazard identification: "Biggest thing they fall down on is hazard identification."

Supervisor leadership: "They are not experienced enough to have developed their leadership skills."

Training delivery: "So much training at the start-up of this rig all at once ... lucky if I remembered 30% of it."

Training content: "Vendors are designing training courses that are not relevant."

THINK training: "We're taught how to write a perfect THINK Plan, not how to use it properly."

Competency: "Do I feel adequately trained to do my job ... no. I think 90% of people on this rig would agree with me."

"Learning under fire."

Element reviewed: Planning and risk management	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Results of the perception data showed mixed responses which indicated 26.2% of the workforce felt that there were too many steps in place to manage risks, while 73.8% of the same participants felt tasks were always adequately planned before work was started.

Assessment output/evaluation:

The majority of participants demonstrated a strong belief in Transocean's risk management processes. The THINK planning process was recognised as a highly beneficial tool for certain jobs, primarily on account of the communications that it encouraged between team members and different work teams. The jobs that personnel felt it offered the most benefit were non-routine, complex, or tasks involving more than one team.

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Personnel generally had a good grasp of what level of THINK Plan was required for the tasks they performed. Credit was given to rig management for ensuring a consistent message reached frontline personnel.

Personnel also felt well informed of the risks they are exposed to in their jobs. This primarily related to the HSE communications that were distributed to the rig. Although many personnel felt that only a select few were relevant to their job roles, the ones that were relevant proved very useful. However, this feedback should be considered alongside the frequently quoted view by senior rig crew members that hazard awareness levels amongst frontline crews are low.

However, a significant proportion of personnel believed that the risk management processes were now being applied to very low risk tasks and were devaluing the process as a result. An example was cited of a written THINK Plan being required for a routine sweeping job. In addition, the THINK Plan process was increasingly being seen as an exercise to protect the workers and the company, should an incident occur. This is influencing the effectiveness of the plan because it is affecting:

- The quality of the plan (e.g. the crews sometimes try to list all of the hazards that have been highlighted in the recent HSE meetings at a generic level instead of specific hazards for that particular task).

- Time to complete the plan (e.g. trying to list all the hazards as explained in the point above can take more time than listing the specific hazards that pose a risk).

- Time to communicate to the team (e.g. a longer time to write the plan can place pressure on the communication phase and time spent doing this may be reduced as a result).

Problems were reported with the supply chain which is affecting the procurement/availability of spare parts offshore. Some reported concerns on the ship were:

- Purchasing is a lengthy process.

- Orders can be cancelled without communication or explanation.

- Parts can be substituted with unsuitable replacements.

There was a feeling that, as the ship was built in Korea, there was inadequate consideration of how comparable spare parts would be sourced from US based manufacturers.

On occasion, it was noted that there was still some duplication between risk management processes. Examples were given of a duplicated hot work system with Chevron. This has led to additional paperwork which appears to serve identical functions.

Several personnel reported that fatigue (both mental and physical) is an issue on the rigs. The short change period and the three week hitch length were areas particularly highlighted in these discussions. It was felt that Transocean did not have any systematic way to address this risk. It was noted that some Supervisors recognised and managed these risks informally by task selection, break periods and job rotation.

Strengths:
- Strong belief in the concept and use of Transocean safety processes.
- THINK planning recognised as a highly beneficial communication tool for certain jobs.
- Levels of the THINK planning process generally understood and applied in a consistent manner on the rig.
- Employees generally feel well informed of the risks related to their job roles.

Significant comments that illustrate these findings:

THINK: "The concept is good."

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"Good as far as making you think about the job you are going to do."

Weaknesses:

- Application of the risk management processes to tasks is perceived to be over the top (routine/low risk tasks).
- THINK seen as an exercise to provide cover in the event of an incident in addition to a tool to prevent incidents.
- Reported issues with getting spare equipment parts.
- Isolated duplications with third party and client risk management processes.
- Physical and mental fatigue risk factor perceived to not be adequately addressed.

Significant comments that illustrate these findings:

Risk management processes: *"Transocean have replaced experience with a process."*

Spare parts for equipment: *"It's hard to get compatible parts in the US."*

"Time is the biggest factor ... time taken to order the part and get it on the rig."

Rig build process: *"Confidence in the ship is now lower than when it came out of the shipyard."*

THINK Plans: *"There are three or four hazards that will always be on there ... you may as well pre-tour them in there."*

"People photocopy THINK Plans for the next day ... I've seen it."

Element reviewed: Management of change	
Method of review: Focus groups, individual interviews.	**Review category:** Managing

Perception data:

98.4% of the workforce who took part in the perception survey felt that they participated in the changes to working practices that affect them. However, a lower proportion of the workforce (60.7%) felt that they were always informed about changes that affect them. Also, 83.3% of the workforce felt that the merger had not impacted negatively on safety performance.

Assessment output/evaluation:

The general perception on the rig was that Transocean does not do an effective job when managing changes. The changes being referred to relate to equipment, processes and organisation change:

- Equipment change e.g. introduction of push poles, RMS introduction which is reported to cause issues for the maintenance teams (poor interface and the functionality not there for some tasks).

- Process change e.g. modification of the implementation of the THINK and START process.

- Organisation change e.g. move from a 14 day hitch to a 21 day hitch.

The first issue relates to the number of changes being made. There is a general feeling that the workforce is not able to keep up with the number of changes being demanded of them. This has led to a widespread feeling of uncertainty and issues with recollection of the current rules, regulations and procedures.

There is a general feeling that there are a high number of changes which introduce additional requirements. This was reported to be a concern for some personnel as they are experiencing problems with remembering all the additions. This additional workload is felt to be hampering the need to focus on the key day-to-day tasks and the management of risk.

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Very rarely do personnel feel like they receive all the relevant reasoning for a change from the people making the changes (i.e. personnel in the Divisional and Corporate offices). This creates problems of acceptance and often leaves the Supervisors with a difficult job to 'sell' the change to frontline personnel.

It is widely believed that the impact of these changes at rig level is not fully appreciated. There were several examples where personnel believed that some changes had introduced more hazards than they had eliminated (e.g. push poles have created additional risk when ascending and descending stairs, and while being used if they are not held correctly). Several of these changes are perceived to be 'knee-jerk' reactions to address issues which occur elsewhere in the Transocean fleet. Rig based personnel have the perception that shore based personnel either do not possess the working knowledge or have an out-of-date working knowledge of the rig, and are therefore not best placed to make these changes.

Personnel feel like they are not consulted when considering and shaping changes which will impact them. They feel like change is something that is done to them rather than a process that they are involved in. This hinders a positive attitude developing towards the change and its acceptance. Several personnel believed that the relationship between the rig and the beach has been damaged on account of this.

There is a perceived lack of communication regarding changes to fully brief personnel on the new requirements that will be expected from them. Additionally, they feel that follow-up support for ongoing changes is not forthcoming and that they are often left on their own to work out how to fully implement the changes.

Strengths:
- General belief that Transocean has the right intention regarding the changes they make (however, it is the execution which causes the problem).

Weaknesses:
Widespread perception of:

- Constant change driven by the beach, very difficult to keep up with.
- Always additions, nothing gets removed.
- Reasoning for changes rarely given.
- Poor consideration of the impact of the change at rig level.
- Lack of consultation.
- Lack of communication.
- Lack of support.

Significant comments that illustrate these findings:

Managing change: "Biggest thing for us is managing change because it never happens like you expect it to happen."

"We are the last people to know of changes that affect us."

"When changes are made we don't hear any explanation as to why. I feel we deserve an explanation as to why."

"No questions, no discussions. We are told to suck it up and do it."

"Really easy to sit in an office and come up with something that looks good on paper but in practice doesn't work so well."

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Element reviewed: Strategies, policies and procedures	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

18% of participants believed some rules and procedures were difficult to understand/complicated, so they did not always follow them. However, 91.8% of participants believed that they would not feel confident taking shortcuts when carrying out tasks. This shows that the majority of personnel are reporting to be compliant with the rules and procedures set out by Transocean. However, the 18% who have reported that they do not always follow the rules and procedures, and those who feel confident to take shortcuts, are still an unquantifiable risk to safe operations.

Assessment output/evaluation:

It was evident that there was a strong belief in the concept of safety management that Transocean implements within the organisation. Coupled with this, there was evidence to suggest that a high percentage of personnel made every effort to be compliant with the various processes and procedures that they were required to follow.

Particular credit was given to the TSTPs, Prompt cards and checklists on the back of written THINK Plans. Personnel felt that these acted as a good aide memoire and often guided them to think about relevant hazards. It could also be used as a good training exercise, if employed in the right way.

However, several of the TSTPs are still not in place for some of the tasks. This results in certain jobs taking longer to carry out as personnel have to perform a lengthy written THINK Plan every time. The situation also increases in risk when there is no TSTP present, as they are there (in part) to aid hazard identification.

The majority of personnel perceive the START process to be a negative communications exercise. This is because it is being driven in part by the perception of a blame culture that exists on the rig. The initial benefit to be gained by the 'one START card per day rule' is now believed to have diminished. It has now turned into a 'pencil whipping' exercise, with a high level of bogus cards. This is in stark contrast to the reports of 'real' safety conversations which are occurring in the workplace but do not get recorded on the START cards due to the (negative) values and respect the crews give to this process. START is not seen as a reliable indicator of safety performance as, in their eyes, someone could comply with the system even though their attitude to safety was poor.

The majority of personnel viewed the safety points reward system as being unfair and having a poor relationship with their individual safety performance. This points system is not acting as a motivator as it was designed to do, for the following reasons:

- There is generally a poor understanding of how safety points are accrued and how they are taken away.

- The link to the START cards one a day requirement is unpopular because crew members view START card compliance as being a poor indicator of safety performance.

- Personnel feel that having their safety points taken away for other crew members' mistakes is unfair. (For example, this can happen if there is an incident on a rig and all attached personnel are penalised; some personnel report losing points despite not being on the rig at the time of an event).

Whilst several members of the workforce commented that the content of the H&S Manual was good in parts, most people felt that it was not user friendly and had been written in an ambiguous manner. In several cases, people felt that the H&S Manual was written to cover the backside of the organisation, rather than to provide a useful document to support safety. It was generally acknowledged that, given its size and complexity, the only way to navigate it is via an online version with the 'search' function. However, not all have access to a computer.

The online document management system 'E-docs' was reported to be very difficult to use by several

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people. The lack of a 'user friendly' interface was reported.

Most personnel felt that there was too much paperwork required to manage safety. This was especially relevant when considering low risk jobs. Most had a good understanding of why paperwork was required but the levels at which it is now required are putting a strain on personnel workload, reducing the value of some of the key processes and sometimes reducing learning opportunities.

When asked their opinion on the safety vision (zero incidents etc.), most people agreed that it was a good vision to have but in reality it was unachievable.

Strengths:
- Strong belief in the concept and use of Transocean safety processes.
- A high percentage of personnel report total compliance with Transocean's rules and procedures.
- Procedures seen as very beneficial for younger, more inexperienced people.
- TSTPs, Prompt cards and checklist on the back of a written THINK Plan viewed positively.

Significant comment that illustrates these findings:

Prompt cards: "Prompt cards work well … good aide memoire."

Weaknesses:
- TSTPs are still work in progress.
- Intent of START process is not being realised.
- Safety points system seen as unclear and unfair.
- H&S Manual not user friendly and not written with the end user(s) in mind.
- High level of paperwork required to manage safety.
- Safety vision seen as unachievable.

Significant comments that illustrate these findings:

THINK process: "Hectic, spend more time on the computer filling out paperwork than doing the work."

Paperwork: "Twenty forms for five jobs."

E-docs: "E-docs is disorganised and hard to search for things."

H&S Manual: "Transocean is worried about liability."

"Purposefully grey in areas so they can interpret it and blame people."

"H&S Manual is written for a lawyer's office."

"Using the physical copy is a nightmare."

START: "The only reason we fill them out is because we have to."

Element reviewed: Leadership	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

1.7% of the workforce who took part in the survey felt that management put operational performance (e.g. drilling) before their safety. However, only 46.7% of the workforce believed that Transocean rewards them when they carry out their work safely.

Assessment output/evaluation:

Leadership on the rig by the OIM and Supervisor team was praised by many personnel. They are seen to send out a consistent safety message and are perceived to try and get outside on the rig whenever they can. This applied to rig leadership from both Transocean and Chevron.

The general effort that Transocean puts into the management of safety was seen as positive and a demonstration of the organisation's commitment to safety. Some personnel highlighted the recent events where operations on the rig were stopped and shut down as a result of dropped objects in the derrick (mast). Operations were suspended to conduct a full review of the design and build of the derrick. This was seen by some as good leadership from Transocean, demonstrating that they prioritise safety over operational performance.

The application of time pressure on frontline personnel was reported to be much improved in recent times. However, there were still isolated reports of frontline personnel feeling under time pressure. Some of this pressure was self induced; however there were still Supervisors who would exert pressure in subtle ways via their behaviour. An example would be the drill crew/client standing in view of the maintenance teams and looking at watches, asking how much longer they would be etc.

The relationship between the rig and shore based personnel is believed to be poor (with the exception of the Rig Manager). This is reported to be driven by:

- The way in which change is managed (see management of change section).

- Frontline personnel feel that they very rarely see shore based management (other than the Rig Manager). On the occasions that they do see these individuals, it is always perceived to be in a negative context (e.g. when there has been an incident).

These two points have played a key part in the perceived degradation of the relationship between the rig and the beach. In particular, the relationship between the rig and the shore based HSEQ Department was highlighted and perceived to be non-supportive.

Whilst many Supervisors were perceived to be conducting productive START tours, there were reports that this was not evident in all Supervisors. Some are not conducting the START conversations in an appropriate manner to gain the maximum benefit of a learning exercise and to portray this process in a positive light.

Strengths:

- Leadership of the rig was universally praised.
- Some personnel perceived Transocean have demonstrated good safety leadership during the first six months of operation.
- Rig management send out a strong safety message and often attend their meetings (both Chevron and Transocean).
- General level of attention given to safety by Transocean is seen as class leading.
- Time pressure on jobs is rarely an issue.

Significant comment that illustrates these findings:

Leadership: "Leaders are actually walking the walk now."

Weaknesses:

- Isolated cases of time pressure being exerted via subtle behaviour.
- Relationship between beach and rig perceived as very bad.
- Perceived large disconnect between the rig and the HSEQ Department.
- Some Supervisors are perceived to not deliver START tours appropriately.

Significant comments that illustrate these findings:

"Shore is controlling rather than it being first line Supervisors."

"Some Supervisors on this rig haven't submitted a START card for three years."

"Beach say they are there to support us but then promptly tell us what to do."

Element reviewed: 2-Way communication	
Method of review: Focus groups, individual interviews.	Review category: Managing

Perception data:

Perception survey results on aspects of communication were relatively positive, with only 11.5% believing they did not get all the information they needed to do their jobs safely, and keep themselves and others safe. Also, only 3.3% of those interviewed felt their line manager did not listen and act on their safety concerns.

Assessment output/evaluation:

Generally, it was reported that communications on the rig were very positive. This refers to communications that occur within teams and between different teams on the rig. There is evidence of high levels of mutual respect, which is thought to be partly responsible for facilitating these communications.

Safety meetings are held regularly at Supervisor level and weekly with teams to facilitate communication on safety related information. Some personnel felt that they were encouraged to take part in these meetings and contribute to safety related discussions. Additionally, some personnel noted that they felt they could provide feedback on safety issues (this mostly referred to their immediate Supervisor or line manager).

Many personnel were complimentary of the relationships they shared with the Rig Managers. They felt listened to, that there was a good balance between positive and negative communication and there was a high level of face-to-face contact.

However, a significant number of personnel noted that communications seemed to be predominantly top down (with a few exceptions). They felt that they had limited opportunity to comment on proposed changes and raise safety concerns at a higher level (e.g. at Divisional or Corporate level). They can feed concerns up via Supervisors but have no confidence in the ability to talk to the 'decision makers' who reside on the beach. They feel their opinion is not listened to or given full consideration. Most situations where communication occurs between rig and beach is perceived to be in a negative context (e.g. during an incident, to address poor safety performance etc.). Many personnel felt that a better balance between positive and negative communication would facilitate the relationship.

Personnel also noted that many of the safety communications are reactive to events. These often lead to 'knee-jerk' changes which are made to alleviate the immediate issue but can have significant knock-on effects which are detrimental to operations. They do not feel that they have the opportunity to comment or discuss these changes. The style of communication regarding change was seen as dictatorial by most personnel which often did not produce the optimum response from those on the receiving end. Many personnel believed this had damaged the relationship between the rig and the beach, and suggested that more face-to-face contact would be highly beneficial.

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Date: 26 May 2010
Prepared by: Barnaby Annan   Lloyd's Register EMEA

Several personnel (predominantly at rig management level) stated that the level of communications were very high at times, which was creating significant workload for them. It was noted that some of these communications are duplicated by different parties in the Divisional/Corporate office. Their opinion is that there is a lack of appreciation of the burden because individuals on the beach think they are the only ones communicating with the rig.

A few personnel mentioned that there was limited feedback on START cards that they had submitted which highlighted an issue they thought required action. An example was used where an unsafe situation with pressure washers on deck had been identified regarding their positioning and use. This issue was not addressed or even acknowledged.

Strengths:

- High levels of inter-team communication on the rig.
- A number of personnel felt well informed on safety issues.
- Safety meetings are held regularly and personnel generally feel encouraged to participate and discuss issues.
- Personnel feel like there is the opportunity to provide feedback on safety issues and the use of safety management processes.
- Good relationship with the Rig Manager.

Significant comment that illustrates these findings:

Team trust: *"There is a good level of support from personnel on the rig, we talk openly and are listened to."*

Weaknesses:

- Several personnel noted that communications were primarily top down.
- Promotional campaigns are reactive to events.
- Employee input not sought or considered when any significant change is planned.
- Several personnel believe Transocean were not good at listening to the rig.
- Level of communication can cause a high workload for some personnel.
- Some personnel reported poor communication surrounding the START system.

Significant comments that illustrate these findings:

Number of communications: *"Four people sent me the same Alert."*

"A lot of us look forward to Friday evenings because the beach personnel go home and we don't get as many emails."

"Three people in the office asked me the same questions – there was no coordination of the request."

"Twenty-five people in the office (on the beach) and they all work separately ... small thing to them to send an email but they are all calling the OIM."

"Bunch of emails from my Manager for stuff that he could get himself from GMS."

Communications on change: *"You'll do it or you won't work here ... they are mandatory."*

"I used to feel like a person at Transocean, now I feel like a number."

Element reviewed: Employee influence	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

100% of the participants surveyed felt that they were encouraged to raise ideas and suggest safer ways to do things at work and 83.6% felt they got to hear about, or participate in, safety improvement initiatives.

Assessment output/evaluation:

The majority of personnel demonstrated that they believed in the intervention system (TOFS). Most quoted specific examples where they built it into their THINK Plans and recalled situations where it had been called as a result of an emerging hazard during a task.

Personnel appeared to be able to accept constructive intervention in a positive manner. The majority of personnel reported that they felt their Supervisors, line managers and rig management would act on their safety concerns, should they raise them. Additionally, many personnel reported that they were encouraged to raise safety concerns and have safety discussions, which often occurred.

It was noted by several personnel that not everyone felt able to call a TOFS in every situation. Some personnel find it difficult when:

- Senior personnel are observed doing something wrong – they assume they know better than them.

- Senior personnel are present at the worksite and personnel assume they will stop a task as they have more knowledge than them.

- Some crew members display inappropriate behaviour towards the TOFS and are not able to give and accept constructive intervention in a positive manner.

The majority of personnel stated that they were encouraged to participate and provide input into safety related discussion. However, this is primarily directed towards their immediate Supervisors and rig management.

Strengths:

- TOFS seen as a good system.
- Some employees feel they are encouraged to actively participate and provide input into safety related decisions.

Significant comment that illustrates these findings:

Raising safety concerns: *"I'll always tell them about my concerns and, in my experience, they'd do something about it."*

Weaknesses:

- TOFS sometimes not called in all situations.
- Employee feedback is not always acknowledged and acted upon as appropriate.

Significant comments that illustrate these findings:

TOFS: *"Different personalities out here; some guys quiet, don't like confrontation."*

"Some reluctance amongst young guys, particularly when it comes to stopping guys further up the chain of command."

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Element reviewed: Monitoring, evaluation and improvement (learning culture)	
Method of review: Focus groups, individual interviews.	Review category: Managing

Perception data:

Results from the perception survey show that the majority of participants felt that START, TOFS, audits, near hits and incident investigations helped them to prevent incidents from happening again (91.7%). There was less agreement (73.3%) with the idea that all incidents were reported, investigated and followed up, meaning that around a quarter of the rig crew felt that some incidents went unreported.

Assessment output/evaluation:

Many personnel mentioned that Supervisors were conducting safety tours as a natural part of their time out on deck. It was noted that some of these would not be classified as 'START tours' but that the intent was the same. This was seen as positive feedback, as the figures and statistics regarding START tours would, in reality, likely be higher than is recorded.

A significant proportion of personnel also claimed that they reported every incident and that they believed rig management took steps to ensure a positive and supportive environment was created to allow them to report with confidence. However, there was a flip side to this point as a number of personnel admitted that they did not feel they could report everything. This was supported by the perception data. Reasons for feeling unable to report everything were:

- The process causes them a great deal of workload and hassle.

- They are fearful of the consequences for themselves and their team mates, should they report certain incidents. They will put this consideration higher than any learning that may be possible.

When asked for examples of why personnel felt like this, they quoted examples where they felt some people have been fired unfairly. This led to numerous circulations of rumours which in turn altered peoples' perception towards this process.

The incident investigation process was perceived by a significant proportion of personnel to be losing its value in certain situations. Whilst they agreed that there were several incidents which required an investigation due to their severity, they noted that investigations were being applied to even the smallest incidents which they felt did not require such a rigorous procedure.

The second issue personnel had with the incident investigation process was that they believed that the root causes of the incident were not identified. Personnel felt that often the investigation process stopped when they had identified a person at fault. They might have recognised that a human error was a contributory factor in the incident but personnel feel that the incident investigation does not look at the systematic inadequacies or failures which caused a lower level of human reliability. Additionally, personnel feel that the incident investigation process is not a positive experience for individuals as they feel it is more of an interrogation rather than a supportive learning process. They noted that they often felt like personnel on the investigation team did not possess the relevant skills to conduct the investigation in an appropriate manner (e.g. communication style).

Corporate memory and retention of lessons learned was not thought to be very good. There were some predominant themes which were given as contributory reasons:

- There was no process evident which would allow new starts to learn the benefits of all the lessons learnt prior to them joining the company.

- HSE Alerts were an enemy of time and they needed at least six weeks to ensure the entire crew had been notified. This sometimes resulted in the message never reaching some members of the crew.

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Date: 26 May 2010
Prepared by: Barnaby Annan   Lloyd's Register EMEA

Strengths:

- Many safety tours are being conducted by senior Supervisors but not necessarily written up on START cards.
- A significant proportion of personnel report everything.
- Rig management striving to create a positive reporting experience.

Significant comment that illustrates these findings:

Incident reporting: "Culture on the rig is open and honest ... when people report, they do not get ragged about it."

Weaknesses:

- Admission that personnel do not always report things as the whole process causes them a lot of work and hassle, and they are afraid of the outcomes.
- A proportion of personnel feel unable to report all incidents.
- Incident investigation perceived to be applied unnecessarily to minor incidents.
- Incident investigation perceived to not always find the root causes of incidents.
- Bringing Safety Alerts to the attention of all personnel is difficult.
- Lessons learned from incidents can be lost over time.

Significant comments that illustrate these findings:

Incident reporting: "If you report, it's wrong, if you don't, it's wrong."

"I've been guilty of walking past stuff (dropped objects) before now."

"People just aren't going to report little stuff."

"No one wants to be the person to break the 162 days."

Incident investigation: "If something happens, I hope I have my butt covered by the paperwork."

"It ticks me off when someone fails or has an incident; they focus on the paper rather than the process that was gone through."

Element reviewed: Trust (blame – just culture)	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Results from the perception survey suggested that there was a split (63.9%) in the number of participants who felt that, if their actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), they felt they could report this without any fear of reprisal. Similarly, 46.7% of those interviewed felt the purpose of incident investigations was to determine who is to blame and should be disciplined.

Assessment output/evaluation:

Many personnel commented on the good relationship that was perceived to exist with the Rig Managers. This translated into generally high levels of trust between the rig and the Rig Managers. There were also high levels of trust and communication within and between teams on the rig.

However, general trust levels between the rig and the Divisional and Corporate office (apart from the Rig Managers) were very low. This section provides a series of reasons for this lack of trust.

Firstly, the incident investigation process was highlighted as an area of concern by many. Whilst some personnel (normally rig management) expressed a renewed faith in the incident investigation process in recent times, these sentiments were not shared by the majority of personnel. The majority saw the

incident investigation as a vehicle to attribute blame and not to learn. It was occasionally noted that lots of good outcomes do come from some investigations, however, in the first instance, it is perceived that the investigation teams always try to look for blame in the person (e.g. did you have your PPE on, let me see your THINK Plan). Additionally, there were perceived occasions where two similar incidents had led to significantly different outcomes (one member of personnel lost his job and the other one did not).

It is thought that Transocean does not have a good appreciation of, or an appropriate tolerance level for, human error. For example, incident investigations are reported to stop when they have found a person responsible and do not go further and look at the systematic inadequacies or failures which caused a lower level of human reliability.

These reasons have led to a significant number of personnel being reluctant to report incidents. It has significantly altered the way in which they view the risk assessment process (i.e. using it as an exercise to cover themselves) rather than a planning tool aiding the risk assessment and mitigation process.

The majority of personnel are fearful of making an error and being dismissed. This mindset can detract from the ability to concentrate on the task in hand and, in some instances, reduce performance and increase error rate. This fear was widespread throughout all levels and teams on the rig, and even personnel with significant experience (in excess of twenty years) felt this.

There was a significant trust issue with the safety figures across the Transocean fleet. Most personnel believed that good safety figures are a product of a lack of reporting, or number "massaging" through misclassification of incidents.

Strengths:
- Good relationship with the Rig Manager.   - High levels of inter-team communication and trust.   - Some personnel (usually rig management) have a renewed faith in the incident investigation process.   **Significant comments that illustrate these findings:** Trust: *"We feel valued and respected here."* Incident investigation: *"I've got faith in the incident investigation process based on my previous experience."*

Weaknesses:
- Majority see incident investigation as a vehicle to attribute blame and not to learn.   - Poor consideration of human error.   - Majority see risk assessment processes as a CYA exercise.   - Fear of making an error.   - Fear of dismissal.   - Lack of trust in Transocean safety data.   **Significant comments that illustrate these findings:** Blame culture: *"Always look to put the blame on someone."* *"Nine out of ten incidents end with someone getting blamed."* Fear of dismissal: *"Not everything gets reported as I am worried about getting fired."* *"I am worried about my job every day."* *"People just lose their jobs and no one knows why."* *"I have never been in a company where so many people are frightened for their jobs if they make a mistake."*

Fear of making an error: "Walking on eggshells."

Risk assessment processes: "If something unforeseen happens, the first thing I think about is 'did I cover it on my THINK Plan?'."

Observation data

The purpose of this section is to summarise the LR EMEA review teams' observations in relation to the meetings attended and activities observed over the duration of the visit to Discoverer Clear Leader.

The team attended a number of meetings over the five day visit. Overall, the meetings were conducted in a professional manner; where applicable they followed a standard format (e.g. pre-tours; Supervisors' meetings; company man calls to the beach); all attendees either participated or had the opportunity to participate.

Observation summary

Supervisors' meetings (2 mornings)

Positives
- Purpose of meeting was clear.
- Relevant personnel present and prepared for meeting.
- Good levels of discussion and participation from the team.
- General tone of the meeting was appropriate and received high levels of attention.
- Safety came across as a high priority.
- Contribution from all people, facilitated by the OIM, going round the room to discuss START cards received the previous tour.

Weaknesses
- START card reviews from the previous day: the majority of them were focused on equipment state (e.g. equipment in the walkways etc.). Whilst this was good on one level, there were no cards or discussions around behavioural conversations.

THINK Plan observations

A sample of THINK Plans was reviewed from the drill crew (days 30-60). General observations were:

Positives
- All sections of the THINK Plans populated.
- THINK process checklist on the reverse side of the paper often utilised.

Weaknesses
- Limited space on the form often made entries untidy and hard to read.
- Some generic listing of hazards (e.g. slips and trips, pinch points) without being specific to their location.
- Some control measures for identified hazards questionable whether this would be sufficient to suitably reduce the risk to 'as low as reasonably practicable' (ALARP).

Emergency Response Drill (observed from control point on the bridge)

Positives
- Effective communication between response teams using set protocols to reduce error.
- Effective allocation of roles and responsibilities.
- Good use of work space in the control room to facilitate communication and allow situation awareness to be maintained between teams.
- Tracking of drill KPI's for performance measurement purposes.

Appendix 1 – Perception survey results

Table 2 - Perception survey results for Discoverer Clear Leader

Q #	Questions		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I do **not** get all the information I need to do my job safely and keep myself and others safe.	COM		39.3%	9.8%	
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		0.0%	47.5%	
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA		53.3%	1.7%	
4	There are always enough people to carry out work safely.	RRR		13.1%	62.3%	
5	Some rules and procedures are difficult to understand and complicated. so I don't always follow them.	SPP		50.8%	16.4%	
6	My line manager listens and acts on my safety concerns.	COM		3.3%	43.3%	
7	The sharing of lessons learnt from START. TOFS. audit. near hits and incident investigations helps me to prevent incidents from happening again.	MON		8.3%	53.3%	
8	I participate in the changes to working practices that affect me.	MoC		1.6%	54.1%	
9	I am **not** always informed of the outcome of changes that affect me.	MoC		41.0%	32.8%	
10	There are too many steps in place to manage risks.	PRM		52.5%	16.4%	
11	Tasks are **not** always adequately planned before we start work.	PRM		44.3%	23.0%	
12	Because of the training and support I have received I fully understand the safety procedures and hazards associated with my job.	TRA		4.9%	49.2%	
13	There are **not** sufficient resources (equipment & money) for me to carry out my job. identify and manage risks safely.	RRR		49.2%	3.3%	
14	I do **not** have enough time to do my job according to rules & procedures.	RRR		54.1%	4.9%	
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		8.2%	60.7%	
16	Transocean rewards me when I carry out my work safely.	LEA		43.3%	43.3%	
17	**Not** all incidents are reported. investigated and followed-up.	MON		36.7%	21.7%	
18	If my actions led to a potentially risky situation (e.g. forgetting to do something. damaging equipment. dropping an object from height). I feel I could report this without any fear of reprisal.	TRU		19.7%	50.8%	
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP		52.5%	8.2%	
20	I do **not** get to hear about. or participate in. safety improvement initiatives.	EMP		55.7%	16.4%	
21	The purpose of incident investigations is to determine who is to blame and should be disciplined.	TRU		41.7%	43.3%	
22	All the changes in the company i.e. mergers have **negatively** impacted our safety performance.	MoC		60.0%	15.0%	
Rig specific questions						
23	I often see THINK plan **not** being properly carried out by others on the rig.	RIG		55.7%	13.1%	
24	Some of the workforce are uncomfortable with calling a TOFS when unsafe situations occur.	RIG		41.0%	37.7%	
25	I often see unsafe behaviour on the rig.	RIG		58.3%	13.3%	

RRR	Resources, roles and responsibilities
TRA	H&S training and competence
PRM	Planning and risk assessment
MoC	Management of change
SPP	Strategies, policies and procedures
LEA	Leadership
COM	2-Way communication (internal and external)
EMP	Employee influence
TRU	Trust (blame – just culture)
RIG	Rig specific questions

Strongly Positive
Positive
Negative

Appendix E – Development Driller II summary report

Lloyd's Register

CONSULTING SERVICES
LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

Client:	Transocean
Project:	Safety Management and Safety Culture/Climate Reviews
Location:	North America Division
Asset:	Development Driller II
Date of assessment:	17th to 22nd March 2010
Team:	2

Technical Report Document Page

Report No.	Report Date	Revision Date	Type of Report
ABN0991642/006.004	8 June 2010		Issue
Title & Subtitle Transocean Safety Management and Safety Culture/Climate Review – Development Driller II		Security classification of this report Restricted to client and Lloyd's Register EMEA	
Prepared Garry Moon Signature		Checked Amy Annand Signature	
Authorised Nick Jackson			
Reporting Organisation Name & address Lloyd's Register EMEA Consulting Services Department Denburn House 25 Union Terrace Aberdeen, AB10 1NN		Reporting organisation reference(s)	
Sponsoring organisation name & address Transocean		Sponsoring organisation reference(s)	
Summary Individual rig report relating to Lloyd's Register Safety Management, Safety Culture, Safety Climate Reviews of Transocean operations.			
Key words		Distribution Divisional Managing Directors General Managers Adrian Rose (Houston)	

Report glossary

AD	Assistant Driller
BOP	Blow Out Preventer
BP	British Petroleum
CAKES	Comply, Authority, Knowledge, Experience, Skills
CMS	Company Management System
CP	Competent Person
CYA	Cover Your A**
DAFWC	Days Away from Work Case
FAC	First Aid Case
FOCUS	Formulate, Organise, Communicate, Undertake, Summarise
FR	Fire Retardant
GSF	GlobalSantaFe
H&S	Health and Safety
HSE	Health, Safety and Environmental
ICS	Inventory Control System
IT	Information Technology
JSA	Job Safety Analysis
LTI	Lost Time Incident
MoC	Management of Change
MSDS	Material Safety Data Sheet
OIM	Offshore Installation Manager
OJT	On the Job Training
PA	Performing Authority
PMAA	Performance Monitoring, Audit & Assessment
POB	Persons on Board
PPE	Personal Protective Equipment
PTW	Permit to Work
RMP	Rig Manager Performance
RMS	Rig Maintenance System
RSTC	Rig Safety Training Coordinator
RSTT	Rig Safety Training Technician/Trainee
SLF	Safety Leadership Foundation
SLT	Safety Leadership Training
SMS	Safety Management System
START	See, Think, Act, Reinforce, Track
THINK Plans	The Company Planning Process
TOFS	Time Out for Safety
TOPS School	Pre-rig Orientation Training
TRA	Task Risk Assessment
TRIR	Total Recordable Incident Rate
TSTP	Task Specific THINK Procedure

Appendix glossary

COM	2-Way Communication (internal and external)
EMP	Employee Influence
LEA	Leadership
PRM	Planning and Risk Assessment
RIG	Rig Specific Questions
RRR	Resources, Roles and Responsibilities
SPP	Strategies, Policies and Procedures
TRA	H&S Training and Competence
TRU	Trust (blame – just culture)

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Contents page

Executive summary

Introduction

On the 17th to the 22rd of March 2010, a team from Lloyd's Register EMEA (Amy Annand and Garry Moon) visited the Transocean drilling rig, Development Driller II (DD II), to conduct a review of the company Safety Management System, safety culture and safety climate.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the Safety Management System (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following this more detailed scrutiny of the data.

Summary of results

The results of the maturity assessment and perception survey are summarised below and include:

1. Classification of industry recognised Safety Management System elements against maturity index criteria.

2. Key strengths and weaknesses identified.

3. Key findings from the perception survey.

1. Classification of Management System elements against maturity index criteria

Table 1 below summarises the LR EMEA reviewers' ratings of the safety culture on board the rig. The LR EMEA reviewers' ratings are a reflection of the interviewees' views of the organisation; these were then averaged to give the initial assessor rating. The five point maturity scale has the following categories:

1. Emerging (lowest category).

2. Managing.

3. Involving.

4. Cooperating.

5. Continuously improving (highest category).

Table 1. Maturity ratings

Element	Rating	Classification
Resources, roles and responsibilities.	3.1	Involving
H&S training and competence.	2.9	Involving
Planning and risk assessment.	2.8	Involving
Management of change.	3.1	Involving
Strategies, policies and procedures.	2.4	Managing
Leadership.	2.6	Involving
2-Way communications (internal and external).	2.5	Involving
Employee influence.	3.2	Involving
Monitoring, evaluation and improvement (learning culture).	2.8	Involving
Trust (blame – just culture).	3.0	Involving

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The data is also presented in the form of a spider chart (see Figure 1 below).

Figure 1. Spider chart of maturity categories
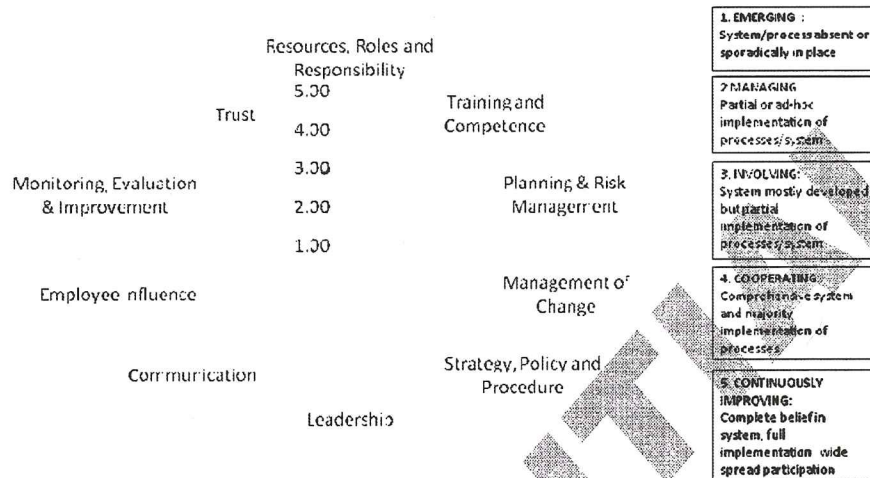
2. Key strengths and weaknesses

The LR EMEA review of the DD II identified a number of key areas of strength, and these included: employee influence; roles, responsibilities, and resources; some aspects of management of change; and some aspects of trust.

The LR EMEA review team felt that employee influence was one of the stronger areas of safety culture onboard the DD II. It was highly evident that virtually all participants felt they could raise safety concerns and participate in key safety discussions throughout the rig. Most people were confident that these concerns would be dealt with promptly, but the degree of follow-up was said to vary, depending on individual Supervisors or members of the rig leadership team.

In relation to roles, responsibilities and resources, the LR EMEA reviewers felt that manpower and time pressures were not generally felt to present a significant risk to safe operations under normal working conditions. The DD II workforce understood their roles and responsibilities pertaining to safety and operations, as well as their responsibilities for others (i.e. their co-workers) on the rig. Supervisors understood that they were there to keep their men safe, to help them understand hazards and control measures associated with operational tasks.

Throughout the LR EMEA review process, Management of change (MoC) has been recognised as an issue within Transocean. The LR EMEA reviewers found this to be to a lesser degree on board the DD II. Crew members were comfortable with the level of control associated with engineering change, and no major concerns were voiced relating to the processes applied to the GSF merger. In short, the general attitude towards change appeared to be one of tolerance and acceptance.

Although trust was a contentious safety culture issue on board the rig, there was clearly a sense of pride and ownership, and people referred to crews on the rig as their "family". This indicates high levels of trust within teams. In addition, there were some pockets of participants who viewed the investigation process as a learning mechanism that was fair and just.

The LR EMEA review team also identified some areas of weakness onboard the DD II and these included: strategies, policies, and procedures; 2-Way communication; some aspects of leadership; and some aspects of trust.

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Date: 8 June 2010
Prepared by: Garry Moon/Amy Annand   Lloyd's Register EMEA

In relation to strategies, policies and procedures, a cause for concern on the rig was the ambiguity and clarity of content of the H&S Manual; this included core risk management tools and PTW procedures. Many found the Manual to be confusing and vague, and this has led to inconsistency in interpretation and application, leading to key safety procedures not being correctly followed. People are seeking a set of clearly defined expectations which are unambiguous, easy to follow, and interpreted consistently by rig leadership. In general, people felt that the H&S Manual and related procedures were complicated and vague, and involved too much paperwork. Changes to the documents were seen to be too frequent and not managed effectively, which led to communication and document control issues.

Despite some positive feedback, there were elements of 2-Way communication that were raised as concerns. People were generally frustrated with the lack of communication concerning organisational change. Some people voiced concerns about the lack of clear communication between hitches, in particular for Supervisors or specialised frontline workforce members (i.e. the Medic or the RSTC). There were also some concerns raised about the clarity and timeliness of communications surrounding the outcomes or findings from incident investigations. People often reported that a common form of communication was the 'grapevine' or 'rumour mills'.

There was a widespread perception that the general safety meeting offered little value. People felt these meetings concentrated too much on the numbers and not what was actually happening on the rig. The practice of safety scoring between departments was not always looked upon as motivational. There was also some criticism about the Perfect Day as a motivational communication tool. Some concerns were also raised about the focus on safety numbers during pre-tours, rather than operational specific hazard awareness: too much time spent looking backwards, not forward.

In contrast to other rigs included in this safety culture review, DD II leadership was considered by the LR EMEA review team to be an area of concern for a number of reasons. It was clear to the LR EMEA reviewers that the leadership from Corporate right through to frontline Supervisors supported safe working practices and would not intentionally do anything to negatively impact the safety of their workforce. However, the actions and behaviours of some key members of the leadership team were unintentionally influencing safety culture on the rig.

Although ambiguity within the H&S manual is commonly acknowledged, the leadership team has failed to clarify, and deliver, a consistent interpretation of various H&S policies and procedures. People felt that leadership often elected to go above and beyond the requirements outlined within the H&S Manual, not so much because it was safer, but because a 'belts and braces' approach was seen to be 'better'. This led to confusion and frustration amongst the workforce. People openly stated that there was an inconsistent approach to safety between the OIMs and that this approach to safety also changed with each new Rig Manager. Frequent changes (perceived or real) in rig management and members of the rig leadership team have further exacerbated this issue.

Comments were made about the leadership styles of rig management, including some members of the rig leadership team, on a number of occasions. Leadership was seen by a minority of participants as being autocratic, dogmatic, and not necessarily supportive, and this could undermine the achievement of strong safety culture and the premise of shared values. There were also a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. There was a perception that, depending on the individual's relationships with the rig leadership team, people were treated differently. Feelings of inequality are likely to negatively impact workforce motivation, in particular those who feel sidelined or at threat. This will erode attempts to create an inclusive safety culture.

Feedback by a minority highlighted inconsistencies and autocracy in communication and leadership behaviour. Overall, it is irrelevant whether this feedback on leadership is fact, fiction, or exaggeration. The root causes of these issues must be defined and addressed or the rig will continue to experience ill feelings, confusion and frustration … and the problem will get worse.

The issues described above also influence trust levels on board the rig. Although there was a widespread belief in the need to report accidents, incidents and near-hits, there was an undercurrent of a non-reporting culture on board the rig. Fear of reporting mostly referred to a fear of reporting dropped objects. In addition to this, there was also a frequently described fear of 'not' reporting, with (perceived) subsequent reprisals. The consequence of these types of behaviours would be

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development of a blame culture i.e. a safety culture that is not equitable, unified and proactive. Fear of this type leads to an adherence culture, where people comply with requirements because of a fear of reprisal; from here, the potential exists for the descent into a blame culture onboard the DD II, which would be further compounded by the aforementioned cliques and 'circles of protection'. A true 'just culture' leads to individual ownership and responsibility for safety.

3. Key findings from the perception survey

Nine of the twenty-five questions in the perception survey failed to reach 80% positive agreement. Of these, the five weakest areas were:

- 41.2% of the crews that took part in the survey felt that they were not always informed of the outcomes of changes that affected them (Q. 9).
- Similarly, 38% of the same group of participants felt that the purpose of investigations was to determine blame and a basis for discipline (Q. 21).
- 35.3% felt that some of the workforce was uncomfortable calling a TOFS during unsafe job situations (Q. 24).
- Over one third (33.8%) of participants believed they could not report a risky situation (including dropped objects) without any fear of reprisal (Q. 18).
- A similar proportion (31.3%) felt that there were too many steps in place to manage risks (Q. 10).

Eight of the twenty-five questions in the perception survey exceeded 90% positive agreement, with one exceeding 95% positive agreement. The top five responses related to:

- Line managers listened and acted on the workforce's safety concerns (96.1%, Q. 6).
- People participated in changes to working practices that affected them (94.1%, Q. 8).
- Lessons learned form START, TOFS, near-hits and incident investigations help crews to prevent reoccurrence (94.1%, Q. 7).
- The same percentage (94.1%) of the participating workforce believed that they had all the information they needed to do their jobs safely and keep themselves and their colleagues safe (Q. 1).
- A similar percentage (94%) also believed that the training and support provided helped them to understand procedures and hazards associated with their jobs (Q. 12).

Figure 2. Perception survey results for the Development Driller II represented as a bar chart
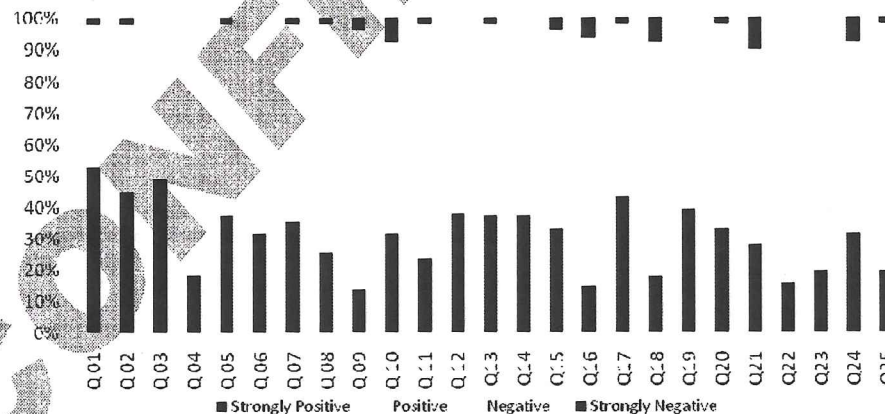
A table of the questions and crew responses survey data can be found in Appendix 1 to this report. Further analysis of the DD II survey data will be undertaken when it is incorporated into the North American dataset.

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Introduction

On the 17th to the 22rd of March 2010, a team from Lloyd's Register EMEA (Amy Annand and Garry Moon) visited the Transocean drilling rig, Development Driller II (DD II), to conduct a review of the company Safety Management System, safety culture and safety climate.

Rig background

Type: semi-submersible, operational in 2005 (legacy GSF rig).
POB: 162.
Client: BP.
Other: operations on the rig during the LR EMEA reviewers' visit were limited as this was a scheduled maintenance period. This included important maintenance work on the BOP which meant the vessel was disconnected from the well.

Significant recent events included the change in offshore management structure (including the establishment of a separate Captain role), a (relatively) new OIM and new Rig Performance and Asset Managers. Recent incidents that may have impacted onboard rig perceptions included the dismissal of a Deckpusher and Roustabout for an incident where the Roustabout lost the tip of his finger when an 800 lb hatch cover slammed shut.

Purpose and scope

The purpose and scope of the assessment was to review the degree of implementation of the system (maturity), safety culture and safety climate on board the rig. This report forms part of a larger review encompassing 21 Transocean rigs. As such, the data presented here will be combined with the findings from other rigs and further analysed. These are therefore preliminary findings subject to further analysis. Conclusions and recommendations will be formulated following a more detailed scrutiny of the data.

The offshore review concluded with a close-out meeting on board the rig which summarised the review findings without detailed scrutiny of the data produced. This close-out was followed by a further close-out meeting in Division again without reference to detailed data. Detailed analysis of review data will be developed and included in the final report.

Methodology and criteria

The assessment was carried out using a series of interviews, focus groups and site/activity observations where implementation of the Safety Management System was assessed using the Lloyd's Register maturity index. This was explained at the opening meeting on board the rig where the assessment scope, criteria and programme was confirmed, confidentiality assured and the reporting mechanism explained.

Areas selected for an appraisal of the climate and maturity of the Safety Management System and its implementation are listed below:

- Resources, roles and responsibilities.
- H&S training and competence.
- Planning and risk assessment.
- Management of Change.
- Strategies, policies and procedures.
- Leadership.
- 2-Way communications (internal and external).
- Employee influence.
- Monitoring, evaluation and improvement (learning culture).
- Trust (blame – just culture).

Personnel, operational areas and processes sampled

Focus groups and interviews carried out over the assessment period are listed as follows:

- Numbers assessed = 51.
- Percentage of POB = 31%.
- 12 formal interviews of rig/regional team members.
- 10 focus groups involving 39 people.

Operational areas and processes sampled during the assessment are summarised as follows:

- Drilling.
- Maintenance.
- Marine.
- Utilities contractors.
- Client third party service hands.

Meetings and observations:

- Daily meetings (pre-tours).
- Weekly safety meetings (rig-wide general and Marine Department).
- Fire drill walk through in the Switch Room.
- Informal observation of operational maintenance job: checking hydraulic pressure on riser hydraulic ram.
- Fire door fault in accommodation block.

Please note that this report refers to various categories of the rig based workforce who were interviewed as part of the review process. They included:

- Management (OIM, Senior Toolpusher, Captain, Chief Engineer).
- Supervisors (Chief Mechanics, Chief Electricians, Chief Mate, Deckpusher, Crane Operators, Tourpusher, Drillers, Assistant Drillers etc.).
- Frontline crews (Roustabouts, Floorhands, Derrickmen, Mechanics, Engineers, Motormen, Electricians, Seamen/Welders/Painters etc.).
- Skilled support (RSTC and Medic).
- Third party service hands (Equipment Technicians, Performance Co-ordinators, Sample Catchers, Mud Loggers etc.).
- Contractors (utilities crews: caterers and accommodation crews).

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Presentation of rig specific results

Output from the assessment processes is presented in the assessment tables:

Element reviewed: Resources, roles and responsibilities	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

84% of the workforce surveyed agreed they always had enough people to carry out the work safely. 92.2% also felt they had enough equipment and financial resources to manage risks. 86.3% of the workforce felt they had enough time to do their jobs safely. These results indicate that the majority of the workforce that was surveyed did not feel resourcing (related to safety) was a weakness.

Assessment output/evaluation:

Overall, the LR EMEA reviewers felt that information provided by the interviewees was aligned with the perception survey results in that manpower and time pressures were not generally felt to present a significant risk to safe operations under normal working conditions. The DD II workforce understood their roles and responsibilities pertaining to safety and operations, as well as their responsibilities for others (i.e. their co-workers) on the rig. Supervisors understood that they were there to keep their men safe, to help them understand hazards and control measures associated with operational tasks. There was a sense of pride and ownership onboard the rig, and people referred to crews on the rig as their "family".

Although this is very positive, some exceptions to this were found. For example, it was identified from a number of participants that operational pressures were most strongly felt as they drew near downtime. It was during that "grey area" before downtime that people reported a lack of adherence to risk management procedures. Also refer to the 'risk management and planning' section for details.

Although equipment issues were not identified as a concern within the perception survey results, there were a few issues raised by a number of interviewees relating to equipment availability. Deck crews commented on a lack of hand tools that meant they had to borrow and share tools from other crews, which resulted in a further loss of tools. The deck crew also gave examples of resorting to use over-sized slings because of a lack of availability of suitable slings. There were widespread concerns related to the availability of safety harnesses due to a recent recall. Interestingly, the safety culture was such that no one contemplated even doing the most minor task above the 2 metre height limit without a harness, and all reported that management supported them on this.

In addition to equipment availability, some concerns were also voiced about the equipment suitability, particularly relating to push poles and long sleeved FR coveralls. The deck crews felt the push poles were unsuitable for certain unstable loads (e.g. partially filled carboys) and actually introduced additional risks during some lifting situations. The coveralls were perceived to be unsuitable and restrictive under working conditions (i.e. high temperature and high humidity) during the summer months. Although strongly voiced, none of these perceptions were rig-wide and may be more representative of how the changes were managed rather than the changes themselves.

Strengths:

- Safety was seen to be an integral aspect of the effective and safe operation of the DD II. The workforce understood the safety responsibilities that they held for themselves and their crews.
- Supervisors understood that their key responsibility was the communication of safety, to enable crews to understand the hazards, risks and controls associated with their work.
- The majority of people felt there was adequate provision of manpower, equipment and budget support to manage H&S risks.
- Most participants felt they had enough time to plan and carry out tasks safely.

Significant comments that illustrate these findings:

"It's a dangerous environment but it's a professional environment."

"We're lucky enough that we have enough redundancy in the equipment to prevent us from rushing the job."

Weaknesses:

- People believed there was a "grey area" just before downtime when there was a reported lack of adherence to risk management procedures.
- There was widespread concern over equipment availability, mainly hand tools and safety harnesses.
- People questioned the suitability of some PPE and the push poles.

Significant comments that illustrate these findings:

"We had a recall on our harnesses (the quick connect types). They took them out of service, and we were left without ... we had one harness for 6 people. We were not allowed to use other crews, couldn't do certain jobs and wasted a lot of time."

Time pressure: "Sometimes when you're in a rush to do something, safety can take a back seat."

Time pressure: "Sometimes yes, sometimes no ... but safety goes out the window when you're in the grey area between day rate and downtime. Once you get on downtime it's not too bad."

Equipment availability: "Our department has to scrounge for tools."

"We had to lift a load with a 30 foot sling because the 20 footers had all gone."

"Push poles are useless ... they're just ornaments."

Element reviewed: Training and competence	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

The vast majority (94%) of participants felt the training and support they had received gave them a full understanding of safety procedures and the hazards associated with their tasks. To a lesser extent, 88.2% of participants felt that they had to demonstrate they could do their jobs safely before being considered competent.

Assessment output/evaluation:

Crew members, for the most part, were complimentary about the training they had received, in particular the OJT programmes. However, some issues were raised surrounding the suitability of some of the training courses, as well as a lack of experience exposure for junior crew members.

TOPS School and the SLT programme were both singled out for criticism, with people reporting that these courses were not always suitable for their needs or aligned with the operational requirements onboard the DD II. Individuals challenged the adequacy and effectiveness of the TOPS School in preparing new hires for operations on the rig. People questioned if Transocean truly understood the value that some of these programmes offered (or did not), as there was some variation in feedback received from course participants and their Supervisors. There was also a reported lack of appropriate training in leadership skills, including: communication, leadership styles, resource management, and conflict resolution.

Feedback also reported levels of concern due to experience and competency gaps. The long drilling programmes inhibit overall experience exposure to various operations. This means that some crews will infrequently see certain operations. As a result, individuals do not have the opportunity to cross-train in

other tasks and progression opportunities are limited. This lack of cross training, in particular, will result in competency silos and leave certain operations vulnerable to an increased level of risk if crew members move on. People also felt that opportunities for progression are limited due to the use of contracted or pool resources, as well as the extended nature of well programmes. This relates mainly to the junior crews and was definitely leading to motivational issues with the Roustabouts. A further concern was that some employees are being promoted without experiencing the same level of task variety and skills development that would be gained on other rigs, essentially leading to a less proficient workforce.

Strengths:
- People felt the training and support they had received gave them a full understanding of safety procedures and the hazards associated with their tasks.
- People were generally satisfied with the OJT programme and associated modules.

Significant comments that illustrate these findings:

"We would not be as effective as we are now without having two RSTCs. Our training compliance percentage is higher because of that."

"There's no better training than on the job training."

Weaknesses:
- Issues were raised surrounding the suitability of some of the training courses, and the value they provided.
- TOPS School and the SLT programme were both singled out for criticism, with people reporting that these courses were not always suitable for their needs or aligned with the operational requirements.
- There was also a reported lack of appropriate training in leadership skills, including: communication, leadership styles, resource management, and conflict resolution.
- Feedback reported levels of concern due to experience and competency gaps.
- People felt that opportunities for progression are limited due to the use of contracted or pool resources, as well as the extended nature of well programmes.
- A further concern was that some employees are being promoted without experiencing the same level of task variety and skills development that would be gained on other rigs.

Significant comments that illustrate these findings:

"TOPS (training) says one thing, but it's different on the rig."

"The SLT needs a reality check."

"Lengthy drilling programmes do prevent Hands from getting valuable experience to ensure competence."

"It's hard to promote on the rig if there's no openings."

Progression and promotion: "People are here as an extra and they're already paying for them ... so they're the ones that get the jobs and that's not fair."

"Third party training companies are more about selling themselves than teaching us ... Transocean (i.e. training management) should sit through these courses to understand if they are really useful."

"They should weight compliance percentage on the training matrix – right now a training video on marine debris is the same weight (i.e. compliance rating) as a one week well control course."

Element reviewed: Planning and risk management	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Results of the survey showed that almost one third (31.4%) of the workforce sampled felt that there were too many steps in place to manage risks. 70.6% of the same participants felt tasks were always adequately planned before work was started. Worryingly, nearly one in five (17.6%) of the participants reported often seeing THINK Plans not being properly carried out by others on the rig. In addition, over a quarter (27.5%) of those surveyed felt they often saw unsafe behaviours on the rig. These results clearly suggest that participants felt that there was obviously room for improvement relating to planning and risk management.

Assessment output/evaluation:

First, it should be noted that the workforce routinely carry out THINK planning and see this process as an important step in managing risk. Discussions that took place during interviews indicated there was a widespread understanding of risk assessment and hazard awareness throughout the rig. People saw value in the use of Prompt cards and appreciated the information contained within TSTPs, in particular for jobs that are rarely performed.

Notably, the rig had adopted a systematic and formal approach to hazards hunts. A schedule had been established, splitting the rig up into areas or departments to be inspected. Supervisors lead the hazard hunts and are expected to include junior crew members.

Although THINK Plans are ritually created, they are often seen as CYA paperwork to have in place in case something goes wrong. People believe that the processes are over-complex and inconsistently applied, particularly when TSTPs and Prompt cards are introduced. A strong perception exists that TSTPs and THINK Plans are too comprehensive for simple, low risk tasks and that there are too many layers in the process. People are unclear (at all rig levels) as to when processes are applied, partially because of the perceived vagueness of the procedures contained within the SMS. Many people felt there was an inconsistent approach to Permit to Work policies, in particular for hot work and isolations. There was a widely held perception that the OIM and members of the rig management team believed it was better to go above and beyond stated procedures leading to further confusion and inconsistent implementation of the THINK and Permit to Work processes.

The TSTP issue was further complicated by the way that information contained in the (GSF) JRAs has been transferred into TSTP format. This has resulted in a huge number of TSTPs (circa 1,000 to 2,500). People valued the content of the JRAs as 'task procedures' (as there were no alternative SOPs), therefore there was resistance to reduce the number of TSTPs. Any efforts by leadership (Divisional and rig) to drastically reduce this number would be perceived by the workforce as a loss of critical information. Additionally, the large number of TSTPs is recognised as being unmanageable. Supervisors recognise that TSTPs cannot be applied for every task which has a TSTP. This has led to an unclear and inconsistent application of when to use a plan. The potential therefore exists for the implementation of a higher risk task without reference to an existing (and appropriate) TSTP.

Although hazard awareness was generally perceived to be good throughout the rig, concern was voiced about the hazard awareness levels of the less experienced crew members. This relates specifically to tasks that they are rarely exposed to due to the protracted natured of drilling programmes.

No one questioned Transocean's and DD II's commitment to safety. However, a significant risk exposure was raised by crew members in relation to the adherence to that commitment at all times. A number of people's feedback was that there are periods ('grey areas') between day-rate and downtime when some safety procedures lapse, and operational priorities reportedly take precedence.

Strengths:
- THINK planning is seen as an important risk management tool.
- There was a widespread understanding of risk assessment and hazard awareness throughout the rig.
- People saw value in the use of Prompt cards.

- Crew members appreciated the information contained within TSTPs, in particular for jobs that are rarely performed.
- The rig had adopted a systematic and formal approach to hazards hunts.

Significant comments that illustrate these findings:

THINK planning: "The more we work with it, (the more) it's becoming second nature."

"We use Prompt cards for everything. It's doing its job: it's good to get you in the mindset ... to prompt you to think."

Prompt cards: "They've got a lot of information that opens your eyes ... even though it can be the same old job, it can wake you up."

Prompt cards: "It covers quite a bit and gives you a good idea of what to look for."

TSTPs: "If I've never done a job before, they're great."

"It's good to be able to search for TSTPs in the global library ... it improves the risk assessment process."

"Know your next move. Know what's coming up, then you can be more aware of the hazards."

"We're pretty good about not having too many people on the rig floor ... we'll get somebody going on the next job."

Weaknesses:
- THINK Plans are perceived to be CYA paperwork to have in place in case something goes wrong.
- People believe that the risk management processes are over-complex and inconsistently applied.
- A strong perception exists that TSTPs and THINK Plans are too comprehensive for simple, low risk tasks and that there are too many layers in the process.
- Feedback highlighted concerns with the way TSTPs had been created from JRAs and the way they were applied.
- Supervisors recognised that the huge number of TSTPs meant that they were not always applied as part of task planning and risk management.
- There is a lack of clarity as to when some risk management processes should be applied.
- Many people felt there was an inconsistent approach to Permit to Work policies, in particular for hot work and isolations.
- There was a widely held perception that the OIM and members of the rig management team believed it was better to go above and beyond stated procedures.

Significant comments that illustrate these findings:

"CYA risk assessment ... you're doing it so you don't get into trouble."

"Even simple jobs: no Prompt card and you're out of here."

"It's the perception (on the rig) that upper management feel that if it's written down, it must be safe."

Inconsistent approaches: "Paperwork done to CYA. Crews are not clear on THINK Plan hierarchy ... different crews do it differently, some crews think you need a THINK Plan for every lift."

THINK: "Everybody's got their own way."

THINK: "I think there are too many layers ... and it's all opinionated."

THINK: "A good process, but they made it too big and there are too many tools in the THINK processes ... they could have simplified it."

> *THINK process: "It's too much for the guys to deal with and they question if they are doing the right thing or the wrong thing … (there should be) one system instead of 3 different."*
>
> *"The use of TSTPs varies with each Rig Manager … and they change a lot."*
>
> *When asked which jobs require a TSTP: "I'd say they haven't been very clear with that."*
>
> *"Everyone has their own idea about rig policy. People are not clear on rig specific policies. They tend to go above and beyond H&S Manual policies … not necessarily because they are safer but because someone thinks it's better."*
>
> *"There're a lot of new policies changing with every shift, like Permit policies for hot work, cold work, web slings."*

Element reviewed: Management of change

Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

94.1% of the workforce who took part in the perception survey felt that they participated in the changes to working practices that affect them. However, a significantly lower proportion of the workforce (58.8%) felt that they were always informed about changes that affect them. Additionally, 72.5% of the workforce felt that the merger had not impacted negatively on safety performance.

Assessment output/evaluation:

Throughout the LR EMEA review process, management of change has been recognised as an issue within Transocean. The LR EMEA reviewers found this to be to a lesser degree on board the DD II. Crew members were comfortable with the level of control associated with engineering change, and no major concerns were voiced relating to the processes applied to the GSF merger. In short, the general attitude towards change appeared to be one of tolerance and acceptance.

However, some concerns regarding MoC were raised. Much of this centred around the frequency of change, in particular relating to rig based organisational change (especially the Rig Managers and onboard rig leadership team) and changes to the H&S Manual.

People felt that change communication was unclear, especially the communication of expectations and change drivers. These communication issues were further perpetuated by the perceived vagueness of the H&S Manual content, coupled with conflicting interpretation of the associated expectations by rig leadership, which led to the perception that documentation and policies changed more frequently than they actually did.

Feedback from Supervisors suggested that it was difficult for some of the younger, less experienced crew members to see emerging changes and call a TOFS. As Supervisors, they therefore played a critical role in recognising task change and stopping the job.

Strengths:

- Crew members were comfortable with the level of control associated with engineering change.
- No major concerns were voiced concerning the processes applied to the GSF merger.
- The general attitude towards change onboard the DD II appeared to be one of tolerance and acceptance.

Significant comments that illustrate these findings:

> *GSF merger: "It was painful, but I think they did a good job."*
>
> *"Managing change has become a team effort … working hand in hand with Transocean."*

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Weaknesses:

- People voiced concerns about the frequency of change, in particular relating to rig based organisational change (especially the Rig Managers and the onboard rig leadership team) and changes to the H&S Manual.
- People felt that change communication was unclear, especially the communication of expectations and change drivers.
- Communication issues were reported to be further perpetuated by the perceived vagueness of the H&S Manual content, coupled with conflicting interpretation of the associated expectations by rig leadership.
- Feedback from Supervisors suggested that it was difficult for some of the younger, less experienced crew members to see emerging changes and call a TOFS.

Significant comments that illustrate these findings:

Beach leadership: "So many changes and they're so frequent that it's impacting the guys on the rig ... they ask me 'who's your boss today?' Every time I come back to work it seemed like it was a new name sending me emails and I'm thinking 'who's this guy?'."

"We've been through a lot of Rig Managers ... it throws us off because each Manager wants to do it their own way."

"Quit force feeding us all of these new procedures and new initiatives. Once before we could all be ourselves, be individuals, now it's standardised ... they're limiting our potential because we're not allowed to think anymore."

Poor organisational MoC communication: "The Captain ... just another position. People don't understand why they did this when it was working just fine the way it was."

Task MoC: "Sometimes it's hard to notice small changes and then it all snowballs ..."

Element reviewed: Strategies, policies and procedures	
Method of review: Focus groups, individual interviews.	Review category: Managing

Perception data:

Worryingly, almost one in five (17.6%) of participants believed some rules and procedures were difficult to understand and complicated, so they did not always follow them. However, 84.3% of participants believed that they would not feel confident taking shortcuts when carrying out tasks.

Assessment output/evaluation:

The rig used the Supervisors and RSTC to interpret and reinforce policy expectations within the H&S Manual. Procedures were also clarified and reinforced during departmental safety meetings.

A cause for concern on the rig, echoed by many crew members, was the ambiguity and clarity of the content of the H&S Manual; this included core risk management tools and PTW procedures. Many found the Manual to be confusing and vague, and this has led to inconsistency in interpretation and application, leading to key safety procedures not being correctly followed. People are seeking a set of clearly defined expectations which are unambiguous, easy to follow, and interpreted consistently by rig leadership.

The varied interpretation of the electrical isolations process is an example of this issue. The stated requirement is to have a Permit to Work for all electrical isolations. This was enforced to the letter by one OIM (which participants explained theoretically means work on any electrical item, even a fridge, needs an isolation certificate), while there were apparent discretionary applications of isolation permits for some related tasks; for example one electrician said he would only get permits for mains isolations over 440 volts.

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Generally people felt that the H&S Manual and related procedures were complicated and vague, and involved too much paperwork. Changes to the documents were seen to be too frequent and not managed effectively, which led to communication and document control issues.

Furthermore, people reported frustration with the implementation of the inventory control policy. People recognised the value of and requirement for the policy, and readily identified reduction opportunities. However it was perceived that Corporate and Divisional management would not provide a mechanism to facilitate this reduction and the rig was left to deal with the residual issues.

Strengths:

- The rig used the Supervisors and RSTC to interpret and reinforce policy expectations within the H&S Manual.
- Procedures were clarified and reinforced during departmental safety meetings.

Significant comments that illustrate these findings:

"I used to follow policy because I wanted to keep my job, now it's about policy being for us, to help protect us."

"The company's putting the effort forward ... that's why I think it's my job to get me and my crews to use these tools."

H&S Manual: "A lot of stuff to cover ... yeah, people say it's vague, but if you clearly identified what you needed to talk about it would be 10 times bigger."

THINK process: "It's a basic process, not too difficult or overwhelming. It's a more simple, more logical approach compared to the JRA system under GSF."

Weaknesses:

- Many crew members criticised the ambiguity and clarity of the content of the H&S Manual.
- Many found the H&S Manual to be confusing and vague, and this has led to inconsistency in interpretation and application, leading to key safety procedures not being correctly followed.
- People felt that the H&S Manual and related procedures were complicated and vague, and involved too much paperwork. Changes to the documents were seen to be too frequent and not managed effectively, which led to communication and document control issues.
- People are seeking a set of clearly defined rig specific expectations which are unambiguous, easy to follow, and interpreted consistently by rig leadership.
- Participants reported frustration with the implementation of the inventory control policy.

Significant comments that illustrate these findings:

Hands-free lifting policy: "They (i.e. push poles) come in handy for tubulars and narrow boxes. But hands-free rules introduce new hazards for some lift situations, like small partially filled tote tanks."

H&S Manual: "Unclear policies full of mumbo-jumbo, college educated summaries."

H&S Manual: "It looks like lawyers wrote it."

H&S Manual: "I've looked at a lot of Manuals and I found Transocean's to be vague with a lot of grey areas. It took 3 to 4 people to interpret the confined space entry rescue procedure ... they should make it easier for offshore people to understand it."

"Manuals? We've got plenty of Manuals ... I wish they could be combined."

H&S Manual: "I read it, but some of it is kinda vague. And sometimes it's hard to get it and find it ... they make so many changes."

CMS: "Just another layer in the onion ... nothing's clearly defined."

"Policies are unclear ... like: at the discretion of the OIM."

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Inconsistent application of Transocean policy: "Everyone's making up their own little rules."

"Too many people trying to tell each other what to do ... it winds up that nobody knows what's going on."

"Guys writing these policies should make it clear: either you will or you won't."

With regard to inconsistent application of Transocean policies: "This rig does its own thing ... are we gonna follow policy, are we not gonna follow policy? It's different with every hitch."

"If they could just clear the air and say 'we'll do it this way.' It would be nice if they actually went by Transocean policy, because then we would know what's expected of us."

Inventory reduction: "We spent a lot of time to identify reduction items ($1.7 million excess of inventory) and now we can't move it and we are not given the tools (i.e. a place in the budget for reallocation) to move it. Corporate control inventory reduction, but there's an unclear path forward ... what are we supposed to do?!"

Element reviewed: Leadership	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Almost one in ten (9.8%) of the workforce who took part in the survey felt that management put operational performance (e.g. drilling) before their safety. 75% of the workforce believed that Transocean rewards them when they carry out their work safely. In addition, 96.1% of the survey participants felt that their line manager would listen and act upon any safety concerns.

Assessment output/evaluation:

In general, people had a positive perception of the dedication to safety and visibility of the rig leadership team. The vast majority of participants appreciated the safety related resources provided by rig leadership. There were some crews that openly recognised and praised the safety leadership qualities of their Supervisors.

However, in contrast to other rigs included in this safety culture review, DD II leadership was considered by the LR EMEA review team to be an area of concern for a number of reasons. It was clear to the LR EMEA reviewers that the leadership from Corporate right through to frontline Supervisors supported safe working practices and would not intentionally do anything to negatively impact the safety of their workforce. However, the actions and behaviours of some key members of the leadership team were unintentionally influencing safety culture on the rig.

As discussed in previous sections ('planning and risk management' and 'strategies, policies, and procedures'), many people found policies and procedures described within the H&S Manual to be confusing and vague. This has led to inconsistencies with interpretation and operational application. Although this ambiguity is commonly acknowledged, the leadership team has failed to clarify, and deliver, a consistent interpretation of various H&S policies and procedures. The LR EMEA reviewers noted several examples to support this, including two completely different interpretations by two members of the rig leadership team regarding when to use a TSTP. Crew members also reported that interpretation of the isolations permitting process varied from OIM to OIM. People felt that there were decisions to go above and beyond the requirements outlined within the H&S Manual, not so much because it was safer, but because a 'belts and braces' approach was seen to be 'better'. This led to further confusion and frustration amongst the workforce. People openly stated that there was an inconsistent approach to safety between the OIMs and that this approach to safety also changed with each new Rig Manager. Frequent changes (perceived or real) in rig management and members of the rig leadership team have further exacerbated this issue.

Comments were made about the leadership styles of rig management, including some members of the

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rig leadership team, on a number of occasions. Leadership was seen by a minority of participants as being autocratic, dogmatic, and not necessarily supportive, with a number of comments that suggested some rig leaders (including Supervisors and management) have the philosophy "do as I say, not as I do". This will clearly undermine the achievement of strong safety culture and the premise of shared values.

There were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. There was a perception that, depending on individual's relationships with the rig leadership team, people were treated differently. This related to outcomes of incidents and near-hits, as well as promotions and career advancement. These feelings of inequality are likely to negatively impact workforce motivation, in particular those who feel sidelined or at threat. This will erode attempts to create an inclusive safety culture.

Feedback also suggested that some crew members would not call a TOFS for fear of a negative reaction by their Supervisor. Although this issue raises concerns, this was not a widely held perception.

Feedback by a minority highlighted inconsistencies and autocracy in communication and leadership behaviour. Overall, it is irrelevant whether this feedback on leadership is fact, fiction, or exaggeration. The root causes of these issues must be defined and addressed or the rig will continue to experience ill feelings, confusion and frustration … and the problem will get worse.

Strengths:

- People had a positive perception of the dedication to safety and visibility of the rig leadership team.
- The vast majority of participants appreciated the safety related resources provided by rig leadership.
- There were some crews that openly recognised and praised the safety leadership qualities of their Supervisors.

Significant comments that illustrate these findings:

"The Captain and Chief Engineer are good."

"The Electricians have Supervisors who would go bat for them. They've got it made."

"I can raise it to the Chief Mate … if we think we can make it better, they want to hear about it."

Supervisor: "He's also always thinking of ways to make it better, safer, faster."

"There are no little fiefdoms being built … everybody works together out here and if somebody needs a hand, they get a hand."

Words used to describe leadership included: "Sincerity; communication; providing resources; out there on deck; respect."

"First Engineer is very good, as well as the Chief Engineer … he'll 'what-if' the sh*t out of it!"

Weaknesses:

- People felt there was an inconsistent approach to safety between the OIMs, particularly relating to the interpretation and operational application of key H&S policies and procedures (e.g. THINK process, use of TSTPs, Permit to Work processes, including isolations).
- Feedback suggested that the leadership team has failed to clarify, and deliver, a consistent interpretation of various H&S policies and procedures.
- People felt that the approach to safety also changed with each new Rig Manager and frequent changes in Rig Managers have further exacerbated this issue.
- The leadership styles of the Rig Manager and some members of the rig leadership team were also commented on, on a number of occasions, and described by a minority of participants as being autocratic, dogmatic, and not necessarily supportive.
- There were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism, and will erode attempts to create an inclusive safety culture.

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- There was some, albeit limited, feedback which suggested that some crew members would not call a TOFS for fear of a negative reaction by their Supervisor.

Significant comments that illustrate these findings:

"Everyone has their own idea about rig policy. People are not clear on rig specific policies. They tend to go above and beyond H&S Manual policies ... not necessarily because they are safer but because someone thinks it's better."

"They left it up to the OIMs to decide how they're going to do it on their rigs. For this rig, there are no rig specific procedures and the OIMs are not aligned."

Supervisors: "All four Supervisors have different approaches ... they follow rules differently and there is poor communication between them."

"Before, we knew where we were going and how we were getting there but not so much now. It's affected the other guys (i.e. the guys doing the work)."

"The use of TSTPs varies with each Rig Manager ... and they change a lot."

"Some don't lead by example, rather 'do as I say, not as I do' ... which isn't leadership. They can be abrasive, taking credit for things they didn't do and push blame on people for things that they did do."

"We lost a lot of good leaders ... the XXX leads by threats, not actions, and the XXX is trying to be a leader by instilling fear."

When asked if someone made an honest mistake, would they be run off: "It depends on who they are and who they know ... they might get away with a slap on the wrist."

"If you're in tight with upper management, you can drop anything you want."

"People have lost their job for dropped objects and others haven't: it's all about your pull ... if you are in the circle, you are a little bit safer than others."

TOFS: "Sometimes if we stop our Supervisor he'll get mad, especially during downtime."

Element reviewed: 2-Way communication	
Method of review: Focus groups, individual interviews.	Review category: Involving

Perception data:

Perception survey results on aspects of communication were very positive, with only 5.9% believing they did not get all the information they needed to do their jobs safely, and keep themselves and others safe. Similarly, only 3.9% of those interviewed felt their line manager did not listen and act on their safety concerns.

Assessment output/evaluation:

People were confident that, if they raised safety concerns with their Supervisors, they would back them up. Feedback suggested that people were encouraged to voice their ideas on how to work safer, which in DD II terms meant working better. This appears to contradict some of the findings on leadership styles (see the 'leadership' section); however, it must be stressed that the negative feedback was obtained from a minority of the participants. The same levels of frustration were not apparent when talking more generally about communication.

There was good feedback about departmental safety meetings; this was backed up by observations during the Marine Department's weekly meeting that had some excellent examples of how to engage, raise awareness, clarify policy and develop rig specific initiatives to improve safety.

As a final positive note, Alerts and the Quickshare system were generally seen to be good.

Despite all the positive feedback, there were a few communication issues that were evident. People were generally frustrated with the lack of information concerning organisational change, not only throughout the GSF/Transocean transition process, but also with personnel changes on the rig and within Division. People found this particularly frustrating because of the perceived high rate of (organisational) change. Some people voiced concerns about the lack of clear communication between hitches, in particular for Supervisors or specialised frontline workforce members (i.e. the Medic or the RSTC). There were also some concerns raised about the clarity and timeliness of communications surrounding the outcomes or findings from incident investigations. People often reported that a common form of communication was the 'grapevine' or 'rumour mills'.

There was a widespread perception that the general safety meeting offered little value. People felt these meetings concentrated too much on the numbers and not what was actually happening on the rig. The practice of safety scoring between departments was not always looked upon as motivational. There was also some criticism about the Perfect Day as a motivational communication tool.

Some concerns were also raised about the focus on safety numbers during pre-tours, rather than operational specific hazard awareness: too much time spent looking backwards, not forward.

Although Alerts and the Quickshare system were generally seen to be good, there was some criticism that the rate of dissemination often created extra work for the rig with Focus actions.

Strengths:
- People were confident that they could raise safety concerns with their Supervisors, and that these would be acted upon accordingly.
- People were encouraged to voice their ideas on how to improve safety.
- People valued the communication of operational safety information during departmental safety meetings.
- Alerts and the Quickshare system were generally seen to be good.

Significant comments that illustrate these findings:

Safety meetings: "If it's going to take 10 to 15 minutes out of your own time, you shouldn't gripe, because it's for your own safety."

"I can raise it to the Chief Mate ... if we think we can make it better, they want to hear about it."

Raising safety concerns with their Supervisor: "He's also always thinking of ways to make it better, safer, faster."

Weaknesses:
- People were generally frustrated with the lack of information concerning personnel changes on the rig and this was further compounded by the perceived high rate of (organisational) change.
- Some of the workforce voiced concerns about the lack of clear communication between hitches, in particular for Supervisors or specialised frontline workforce members (i.e. the Medic or the RSTC).
- There were also some concerns raised about communications surrounding the outcomes or findings from incident investigations.
- There was a widespread perception that the general safety meeting offered little value.
- Some concerns were also raised about the focus on safety numbers during pre-tours, rather than operational specific hazard awareness: too much time spent looking backwards, not forward.
- Although Alerts and the Quickshare system were generally seen to be good, there was some criticism that the rate of dissemination often created extra work for the rig with Focus actions.

Significant comments that illustrate these findings:

Pre-tours: "Too much looking backwards at the number of START cards, rather than looking at the upcoming hazards of the day."

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> Weekly safety meeting: *"They present a bunch of information that's useless: number of TSTPs, number of STARTS, number of Prompts, number of TOFS, number of environmental ... they could take that time and talk about stuff that's more important (i.e. like making Safety Alerts relevant to current operations)."*
>
> The general safety meeting: *"Every now and again they will come up with something useful, but for the most part, it's time to take a nap."*
>
> General safety meeting: *"It ain't nothing but numbers ... it's all about comparing departments against each other!"*
>
> *"Don't often find out what happened the weeks we weren't here ... it's mostly done through the grapevine."*
>
> *"Communication via the rumour mill: it's like being in high school ... no, it's worse than high school!"*

Element reviewed: Employee influence	
Method of review: Focus groups, individual interviews.	**Review category:** Involving

Perception data:

92.2% of the participants surveyed felt that they were encouraged to raise ideas and suggest safer ways to do things at work and 86.3% felt they got to hear about, or participate in, safety improvement initiatives. Over a third (35.3%) of the people surveyed felt some of the workforce were uncomfortable calling a TOFS when unsafe situations occurred.

Assessment output/evaluation:

The LR EMEA review team felt that employee influence was one of the stronger areas of safety culture onboard the DD II. It was highly evident that virtually all participants felt they could raise safety concerns and participate in key safety discussions throughout the rig. Most people were confident that these concerns would be dealt with promptly, but the degree of follow-up was said to vary, depending on individual Supervisors or members of the rig leadership team.

Although people were confident that their concerns would be dealt with, the effectiveness of processes used to deal with these concerns was questioned by the LR EMEA reviewers. This was not so much the case for straight forward corrective actions. If, however, solutions were more complicated (i.e. providing additional fall protection/harness points for heli-fuel tank operations) the process was subject to delays. One participant claimed that he had to resort to utilising a BP process to get his concern dealt with.

As previously mentioned, concern was raised over the ability of some younger, less experienced crew members to call a TOFS. People felt this was, in part, due to a lack of hazard awareness, but it was also clear that some of these crew members were not empowered to stop a job because of potential negative reactions from Supervisors.

Strengths:
- Virtually all participants felt they could raise safety concerns.
- Most people were confident that these concerns would be dealt with promptly.

Significant comments that illustrate these findings:

> Pointed out his crew called a TOFS on him: *"They get me sometimes ... I get complacent."*
>
> *"I feel safe on this rig, because I control what I do."*
>
> *"They always address our concerns ... if it's a safety concern."*
>
> TOFS: *"A Painter stopped the Captain when he was about to go under a red tape ... and people react*

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> *good to it. It's like 'man, I know you're right!'"*
>
> *Safety concerns: "All concerns are legit until proven otherwise."*

Weaknesses:

- The degree of follow-up for safety concerns that were raised was said to vary, depending on individual Supervisors or members of the rig leadership team.
- Although people were confident that their concerns would be dealt with, the effectiveness of processes used to deal with these concerns (in particular those concerns with more complex corrective actions) was questioned by the LR EMEA reviewers.
- Concern was raised over the ability of some younger, less experienced crew members to call a TOFS.
- Worryingly, there is a perception that some of the younger crew members were not empowered to stop a job because of potential negative reactions from Supervisors.

Significant comments that illustrate these findings:

Safety concerns: "Some listen more than others. The degree of follow-through would depend on who was the XXX at the time."

"It's done because they said so, not because it's right or wrong."

TOFS: "You think you're doing right by saying something, but you're made to feel like a dumb ass."

"Sometimes I feel that some people don't always hold up to TOFS and blow you off."

Element reviewed: Monitoring, evaluation and improvement (learning culture)	
Method of review: Focus groups, individual interviews	Review category: Involving

Perception data:

Results from the perception survey show that the vast majority (94.1%) of participants felt that START, TOFS, audits, near-hits and incident investigations helped them to prevent incidents from happening again. There was slightly less agreement (86.3%) with the idea that all incidents were reported, investigated and followed up.

Assessment output/evaluation:

The perception survey results clearly indicate that DD II has bought into the concept of "an ounce of prevention is worth ten ounces of cure". During interviews, virtually all participants felt that START was a valuable process that had the potential to prevent injuries and near-hits.

As positive as people were about the START process, they were equally negative about how the process has been implemented onboard the rig. Feedback suggested that START, as a mechanism to help identify and rectify unsafe behaviours, is currently not delivering against its stated objectives, and this is mainly down to the way in which it has been implemented. People often resented the requirement to document one card a day, and there were mixed feelings about linkages of the 'one a day' START card requirement to the BP well bonus, as well as the communication that this is a "condition of employment". As a result, there are a large number of cards that are made up or simply record routine conversations in order to comply with the 'one a day' rule. People openly recognised that the data emerging from the cards portrays a false picture of safety performance and potential areas for improvement. The end result is a complete devaluation of a process that was previously highly regarded by the workforce.

There was additional feedback on the START process that further supported people's depreciated perception of the process, including:

- A lack of feedback on cards that have been submitted.
- A lack of involvement at a Supervisory level to monitor the quality of cards, address concerns

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and provide motivation for participation.
- Over-emphasis on the number of cards submitted, rather than the quality of cards.
- START tours are used mainly as a monitoring mechanism, rather than as a conversational tool, and a majority of junior crew members reported that they were rarely asked to join their Supervisors on tours.

Similar to START, people recognised the value of audit and inspection programmes as improvement tools, but they also felt overwhelmed by the number and frequency of audits and inspections (a reported 32 are scheduled for this year). Concerns were raised about the repetitive nature of audit scopes and the value of actual findings, which was often associated with the competency or experience of the audit team. Feedback suggested that crews often concentrated on preparing for audits and dealing with subsequent corrective actions, when they should be (and genuinely want to be) focusing on the job at hand.

Key members of the workforce also voiced concerns over the amount of time devoted to investigations. While the LR EMEA reviewers were on board, there was a team of four people conducting a three day investigation (a total of 72 man-hours) relating to a small volume acid leak from within one of the deck containers. Again, people understood why the investigation needed to take place, but questioned the value of the process as it pulled crew members with key safety roles away for extended periods of time. This was another example where crew members questioned the depth of investigations, and if they realistically reflected the (potential) risk profile of the actual incident.

Although there was a widespread belief in the need to report accidents, incidents and near-hits, there was an undercurrent of a non-reporting culture on board the rig. This was partially evident in the existence of a blame culture on board the rig (see details in the 'trust – just culture' section) linked with a fear of reprisals, and people were also reluctant to report injuries in particular (even minor ones) because they felt the reporting and follow-up process was over-excessive and bureaucratic.

Strengths:
- The vast majority of crew members believed that key risk management tools could be used to monitor, learn, and improve as a means of preventing injuries and incidents.
- People recognised the potential value of the START process as a monitoring and communication tool.

Significant comments that illustrate these findings:

Start cards: "It definitely has its positives … even if someone sits down and makes up a START card, then they have been thinking about safety."

"Yes … we're not going to hide things from the office, we're not going to hide things from the client, and we're not going to hide things from each other."

"If the stats are going to make us look bad because I needed a Band Aid, then I don't care."

Near-hit reporting: "I'd feel better reporting. If another crew got hurt doing the same job the next day then I'd feel bad."

Weaknesses:

START related:
- Feedback suggested that START is currently not delivering against its stated objectives, and this is mainly down to the way in which it has been implemented.
- People often resented the requirement to document one card a day.
- There are a large number of cards that are made up or simply record routine conversations in order to comply with the 'one a day' rule.
- People openly recognised that the data emerging from the cards portrays a false picture of safety performance and potential areas for improvement.
- There is a perceived lack of feedback on cards that have been submitted.
- People described a lack of involvement at a Supervisory level to monitor the quality of cards, address concerns and provide motivation for participation.

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- Concern was raised about an over-concentration on the number of cards submitted, rather than the quality of cards.
- People felt START tours are used mainly as a monitoring mechanism, rather than as a conversational tool, and a majority of junior crew members reported that they rarely were asked to join their Supervisors on tours.
- The end result is a complete devaluation of a process that was previously highly regarded by the workforce.

Audit, inspection and incident investigation related:
- People felt overwhelmed by the number and frequency of audits and inspections (a reported 32 are scheduled for this year).
- Concerns were raised about the repetitive nature of audit scopes and the value of actual findings, which was often associated with the competency or experience of the audit team.
- Crew members felt too much time and effort was depleted in preparing for audits and dealing with subsequent corrective actions.
- Key members of the workforce also voiced concerns over the amount of time devoted to investigations.
- People questioned the value of the incident investigation process as it pulled crew members with key safety roles away for extended periods of time.
- The LR EMEA reviewers questioned if the depth(s) of investigations realistically reflected the (potential) risk profile of the actual incident.
- Although there was a widespread belief in the need to report accidents, incidents and near-hits, there was an undercurrent of a non-reporting culture onboard the rig.

Significant comments that illustrate these findings:

START: *"One a day ... what does it tell you? It lets you know that everyone wrote one card per day."*

START: *"I write the same good card just to get one in."*

START: *"It's good, but then again it's something that's been taken too far. I am a fan of START, but not 'one a day' ... people are chewed out for not turning in a card, not for the quality of the card. The data's totally wrong."*

START: *"We hand cards into boxes and never hear anything more about it, unless we don't do it."*

"If you link your bonus to a START card, people make them up to ensure they get their bonus ... they've become too fixated on the numbers."

"One a day START card is a condition of employment and I'm gonna write the same card every day, if that means I'm gonna save my job."

"We see the number of START cards and the TRIR, but we don't know if the two are related or if there's been an impact."

"Don't find the numbers and all the trending useful and I don't feel it's useful to trend departments against each other."

Audits: *"Overwhelming. It seems like a lot of them are repetitive (i.e. subject matter). You go from one audit to another, one inspection to another, and it feels like we are focusing more on audits than our work."*

"Too many audits ... when somebody says the word 'audit' it's like 'oh God, not another one!' It seems like when one is done, here comes another one ... we do get good information, it's just we get too many of them."

Audits: *"Too damn many of them."*

"When it comes down to it, we're only one screw-up away from the door."

> *"Not reporting for fear of repercussion? No. Not reporting for fear of looking like a dumb ass? Yes. "*
>
> *"With a lot of stuff you report, you've gotta go through the ringer. "*
>
> *Not all incidents are reported, because: "a little bit of fear and the investigation process is painful. "*
>
> *Reporting near-hits: "Won't report them if we're alone … the investigation will last 3 to 4 days. "*

Element reviewed: Trust (blame – just culture)	
Method of review: Focus groups, individual interviews.	**Review category:** Involving

Perception data:

Results from the perception survey suggested that the there was a split in the number of the participants who felt that, if their actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), they felt they could report this without any fear of reprisal (66.7%). A worrying number (38%) of those interviewed felt the purpose of incident investigations was to determine who is to blame and should be disciplined.

Assessment output/evaluation:

There was a sense of pride and ownership on board the rig, and people referred to crews on the rig as their "family". This indicates high levels of trust within teams. In addition, there were some pockets of participants who viewed the investigation process as a learning mechanism that was fair and just.

Although the LR EMEA reviewers did identify positive responses to the incident investigation process, a number of participants had contrasting views that the process was used to apportion individual blame when incidents occurred. Although there was a widespread belief in the need to report accidents, incidents and near-hits, there was an undercurrent of a non-reporting culture onboard the rig. Fear of reporting mostly referred to a fear of reporting dropped objects. In addition to this, there was also a frequently described fear of 'not' reporting, with (perceived) subsequent reprisals. This was by no means a universal view. It was, however, significant enough to warrant concerns that behaviours induced by this fear would be negative (i.e. not reporting or covering up an incident). The consequence of these types of behaviours would be development of a blame culture i.e. a safety culture that is not equitable, unified and proactive. Fear of this type leads to an adherence culture, where people comply with requirements because of a fear of reprisal; from here, the potential exists for the descent into a blame culture onboard the DD II. A true 'just culture' leads to individual ownership and responsibility for safety.

Apathy is a further consequence of the behaviour described above. In one example, a member of the LR EMEA review team held open a broken fire exit door for approximately 30 minutes to allow people to access the cinema for a pre-tour meeting. The broken door was on a defined 'lifeboat' route. If the door had not been held open, and an evacuation had been required, the crew attending the pre-tour would have found their main exit route blocked. This malfunctioning door is one issue. However, another significant concern was that crew members knew it was defective as it had broken before. Worryingly, a significant number of the workforce (who walked past the door as it was held open) appeared to be completely apathetic to the problem, or the application of any robust solution. It is openly recognised that Transocean has an expectation that all individuals will take accountability for their own safety and the safety of others. This incident questioned whether this expectation has been understood and accepted by all.

As previously mentioned in the 'leadership' section, there were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. There was a perception that, depending on people's relationships with the rig leadership team, individuals were treated differently. This related to outcomes of incidents and near-hits, as well as promotions and career advancement. These feelings of inequality are likely to negatively impact workforce motivation, in particular those who feel sidelined or at threat. This will erode levels of trust and any attempts to create an inclusive safety culture.

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Strengths:

- There was a sense of pride and ownership onboard the rig, and people referred to crews on the rig as their "family".
- There were indications of high levels of trust within teams.
- There were some pockets of participants who viewed the investigation process as a learning mechanism that was fair and just.

Significant comments that illustrate these findings:

"I used to follow policy because I wanted to keep my job, now it's about policy being for us, to help protect us."

"A lot of people are scared that if something goes wrong then they will be fired. If they used the tools and risk assessed the job, then they wouldn't be fired."

"This is a good rig and none of us want to go."

"The rig is compartmentalised because of departments, but it's not us against them … at the end of the day this is our rig, our family."

"People who have been working in the industry for a long time have a misconception that the investigation is all about blame."

Weaknesses:

- A number of participants expressed views that the accident investigation process was used to apportion individual blame when incidents occurred.
- Although there was a widespread belief in the need to report accidents, incidents and near-hits, there was an undercurrent of a non-reporting culture on board the rig.
- Fear of reporting mostly referred to a fear of reporting dropped objects.
- In addition to this, there was also a frequently described fear of 'not' reporting, with (perceived) subsequent reprisals.
- There was evidence of a fear based 'adherence culture' with the potential that this could descend into a blame culture.
- There were a number of comments relating to cliques and a 'circle of protection' which related specifically to instances of favouritism. This will erode levels of trust and any attempts to create an inclusive safety culture.

Significant comments that illustrate these findings:

"When an investigation team comes on board, they always bring somebody back with them to Houston. We got us a saying 'they come with 4 and leave with 5'."

"Nobody seen it, nobody heard it … so why should I lose my job over it?"

"If you do drop something, all you can think of on the way back down is 'have I covered my bases?'"

"Too many eyes … too many cameras on this rig not to report a dropped object."

Are injuries reported?: "Yes … because you'll get fired."

"There's too much concentrating on paperwork and not enough on the job … they're worrying that they'll get fired if they don't do their paperwork."

"Our bosses are scared of the XXX bosses on the rig … It's that clique thing again."

"If you're in tight with upper management, you can drop anything you want."

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Observation data

The purpose of this section is to summarise the LR EMEA review team's observations in relation to the meetings attended and activities observed over the duration of the visit to Development Driller II

The team attended a number of meetings over the 5 day visit. Where applicable, the meetings followed what appeared to be a standard format. All attendees either participated or had the opportunity to participate.

Pre-Tour Meetings (both morning and evening meetings)
The reviewers attended a number of pre-tour meetings over the course of the visit. The following represents a summary of the team's observations: • Pre-tour meetings were well attended by crew members and third party service hands. • Management visibility and participation was generally good. Meeting led by the OIM with input from rig leadership team and RSTC. The Company Man took a central role. • During one session, visiting Divisional Leadership had a brief stand-up that focused on safety and was delivered with relevant and meaningful examples. It re-iterated the importance of using TOFS and was a good display of leadership. • The number of START cards and TOFS submitted in the past day were all identified. • Participation was sought from the leads, and the personnel generally responded to it. • Recognition was given to individuals for positive safety actions. • Operations were covered, but the links to hazards and risks were not fully explored. There was also a white board that had a list of current operations being conducted by all teams, but this did not appear to be updated by some crews. • The reviewers felt that there was a lack of forward-looking time spent on upcoming operational hazards and too much time on what happened on the previous tour, including a focus on the number of START cards (not about what the conversations were).
Fire escape door failure
The LR EMEA Review team observed that a fire door, which enabled emergency access from the accommodation module to the lifeboats, was broken. At the time of this observation, the pre-tour meeting was about to commence in the cinema. One of the LR EMEA reviewers held open the door for approximately 30 minutes to ensure that safe access to the lifeboats was maintained. Feedback confirmed that: a) the broken door was known about and b) that it had been broken before. The conclusion of this observation was that a number of the crew (including some members of the onboard rig leadership team) were apathetic towards this serious defect. The defect was eventually dealt with by the First Mate. A rig with a strong safety culture would have meant the first person to identify this would have reported this and held themselves accountable for ensuring the situation was safe until a maintenance person was on site. Fixing it properly would have been high on the list of priorities.
Weekly departmental safety meeting – Marine Department
The weekly safety meeting was well-attended by members of the marine team, as well as the Medics. The meeting was led as a team effort by the Captain and the Chief Mate. The meeting opened up with recent incidents (including dropped object incident involving mast-mounted communication equipment) and their relevance to DD II operations, and clarified Transocean's responsibility of ensuring their standards, even with third party operations. There was a review of the previous minutes to ensure that open discussion points had been clarified. The Captain then introduced a marine stability video of the Ocean Ranger tragedy that occurred in 1982 with the loss of 84 lives. They stopped the video at pertinent points and relayed similarities to DD II

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operations, and included several reinforcement messages relating to Transocean H&S policies, including THINK. The ensuing discussion centred on plans to create a series of damage control drills that focussed on marine integrity risks. This was an excellent meeting with good levels of interaction between all participants. It clearly demonstrated that the Marine department adopted a team approach to communicating and improving safety performance.

Weekly safety meeting – General Rig

The weekly meeting was held in the cinema room and was well attended by all crews, including third party service hands. All members of the rig leadership team were present and the meeting was led by the RSTC, with input from the OIM and Captain. The meeting started out with a re-cap of incidents that had occurred on board the rig, including uncontrolled release of a water-tight door, nitric acid "chain-of-custody" (i.e. loss of containment) event, and flash belch-out of the No. 5 engine exhaust. There was a "Safety Item" session that focussed on SCBA (including SCBA specifications, donning and operational procedures). The next session highlighted the number of START cards submitted over a specified number of days (it was all about the numbers and nothing about the quality of the information contained within the cards). There was also a claim that they had completed 546 "audits" of Prompt cards, with no details on the "audit" findings. The BP Company Man then led a session that shared recent BP operational incidents, including a near hit with an over-extended walkway on the Mad-Dog and vessel collision near hit with the Enterprise. As part of the Safe Way Forward campaign, there was a brief reminder of hands and finger injury hazards and controls, but no supporting information on current statistical trends or impacts from the Safe Way Forward campaign. The meeting closed out with a presentation from the Wellness Programme contractors who were kicking off a healthier lifestyle campaign on board the rig.

Overall there was a limited amount of participation, which supports feedback obtained during review interviews. The Wellness Programme did create some interest, which was encouraging to see.

Job planning and execution – Checking hydraulic pressures on the riser tray

The review team tagged along with a Chief Mechanic and a Roughneck as they carried out hydraulic pressure checks on the drill floor main hydraulic lift cylinders. As a team, they went through their Prompt cards, repeated tasks, hazards and controls. They proceeded to job-site and checked pressure readings on one side of the cylinder. The next step was to check pressure readings on the backside of the cylinder, which required a 10 foot ladder, harnesses, tie-off tools and a radio. The Chief Mechanic repeated the tasks and associated hazards to the Roughneck and ensured understanding. The Roughneck held the ladder while the Chief Mechanic checked the pressure, ensuring harnesses were in place and tools were tied-off. Pressure readings were normal, which likely meant that reduced lift performance was not due to hydraulic problems. The task commenced without incident, although there were some minor communication problems with the radio, but they sorted this with little trouble. Once they completed the task, they returned equipment and reported back findings to the other Chief Mechanic, and then personally reported pressure readings to the Driller and Tour Push in the Drill Shack. Even though this was a relatively straight-forward job, the planning still enabled the job-team to plan the task, identify and communicate risks and carry out the task without incident.

Walk through of the weekly drill – Fire in Switch Room

This drill was a walk-through, because the actual scheduled drill that was due to take place on the main deck was cancelled due to bad weather. The drill was led by the Chief Mate and appeared to be well-attended by frontline workforce and supervisors alike. As a group, they entered the Switch Room and openly discussed obvious fire hazards, room hazards (including escape routes), redundancy spray protection, and communication systems. Everyone did an individual walk-around for 5-10 minutes, in part to enable the Fire team to become familiar with the room lay-out, but also to identify other potential hazards and risks. A number of questions and comments arose to support and clarify what the Chief Mate highlighted during the walk-through. People raised issues about the location of the water mist valves and the call buttons, the voltage hazards and the hazards associated with electrical fires (including combustion of plastics). Overall, the Chief Mate did a good job with message delivery and getting people to think beyond the obvious hazards and control measures. There was a good degree of participation and knowledge sharing about the hazards, risks and use of response and rescue equipment.
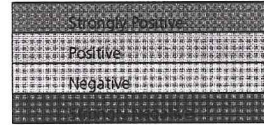
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Appendix 1 – Perception survey results

Table 2. Perception survey results for the Development Driller II

Q #	Questions		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I do **not** get all the information I need to do my job safely and keep myself and others safe.	COM		41.2%	3.9%	
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		5.9%	47.1%	
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA		41.2%	9.8%	
4	There are always enough people to carry out work safely.	RRR		16.0%	66.0%	
5	Some rules and procedures are difficult to understand and complicated, so I don't always follow them.	SPP		45.1%	15.7%	
6	My line manager listens and acts on my safety concerns.	COM		3.9%	64.7%	
7	The sharing of lessons learnt from START, TOFS, audit, near hits and incident investigations helps me to prevent incidents from happening again.	MON		3.9%	58.8%	
8	I participate in the changes to working practices that affect me.	MoC		3.9%	68.6%	
9	I am **not** always informed of the outcome of changes that affect me.	MoC		45.1%	37.3%	
10	There are too many steps in place to manage risks.	PRM		37.3%	23.5%	
11	Tasks are **not** always adequately planned before we start work.	PRM		47.1%	27.5%	
12	Because of the training and support I have received I fully understand the safety procedures and hazards associated with my job.	TRA		6.0%	56.0%	
13	There are **not** sufficient resources (equipment & money) for me to carry out my job, identify and manage risks safely.	RRR		54.9%	5.9%	
14	I do **not** have enough time to do my job according to rules & procedures.	RRR		49.0%	13.7%	
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		7.8%	54.9%	
16	Transocean rewards me when I carry out my work safely.	LEA		18.8%	60.4%	
17	**Not** all incidents are reported, investigated and followed-up.	MON		43.1%	11.8%	
18	If my actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), I feel I could report this without any fear of reprisal.	TRU		25.5%	49.0%	
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP		45.1%	15.7%	
20	I do **not** get to hear about, or participate in, safety improvement initiatives.	EMP		52.9%	11.8%	
21	The purpose of incident investigations is to determine who is to blame and should be disciplined.	TRU		34.0%	28.0%	
22	All the changes in the company i.e. mergers have **negatively** impacted our safety performance.	MoC		56.9%	27.5%	
Rig specific questions						
23	I often see THINK plan **not** being properly carried out by others on the rig.	RIG		62.7%	17.6%	
24	Some of the workforce are uncomfortable with calling a TOFS when unsafe situations occur.	RIG		33.3%	27.5%	
25	I often see unsafe behaviour on the rig.	RIG		52.9%	25.5%	

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RRR	Resources, roles and responsibilities
TRA	H&S training and competence
PRM	Planning and risk assessment
MoC	Management of change
SPP	Strategies, policies and procedures
LEA	Leadership
COM	2-Way communication (internal and external)
EMP	Employee influence
TRU	Trust (blame – just culture)
RIG	Rig specific questions

Appendix F – Annex C North America Statistical Report

Lloyd's Register

CONSULTING SERVICES
LLOYD'S REGISTER EMEA
ABERDEEN ENERGY

Client:	Transocean
Project:	Safety Management and Safety Culture/Climate Reviews
Report:	Statistical Report – Annex C
Title:	North America Statistical Report
Date:	17" June 2010

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Contents page

NAM review results

Figure 1 below shows a spider diagram of the average scores for each of the ten domains when the interviews were conducted in the NAM Division, at the Division office, on the Deepwater Horizon, the Development Driller II, the Discoverer Clear Leader and the Marianas.

Figure 1. NAM review data

As the graph shows, whilst there were slight variations in the scores, the LR EMEA reviewers scored all ten domains as either Level 2 (Managing) or Level 3 (Involving) in the maturity matrix. 'Resources, roles and responsibilities' scored highest (3.1) out of the ten domains, with 'Leadership' and 'Employee Influence' close behind (both domains scored 3.0). 'Management of Change' (MoC) scored the lowest out of the ten domains (2.2).

There were a number of concerns related to MoC that contributed to the low score for that domain. Organisational change was not believed to be managed well; consultation processes in particular were viewed as being weak. A commonly cited example of inadequate MoC processes was the hitch rotation change from two weekly to three. The change process, including consultation with the workforce and the monitoring of residual risks arising from the change, was considered to be inadequate. There were also concerns surrounding the effective application of START and TOFS as task change management tools. Some Supervisors and Managers voiced concerns over the ability of some crew members to properly apply these tools due to inexperience, poor hazard identification and risk awareness.

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Onshore and offshore workforce comparisons

This section provides a summary of all the LR EMEA review data captured at the Divisional office in Houston and on the four rigs in the NAM Division. Figure 2 shows the LR EMEA reviewer scores from the Divisional office interviews and from the interviews on the four rigs as two separate lines.

Figure 2. Divisional/offshore comparisons
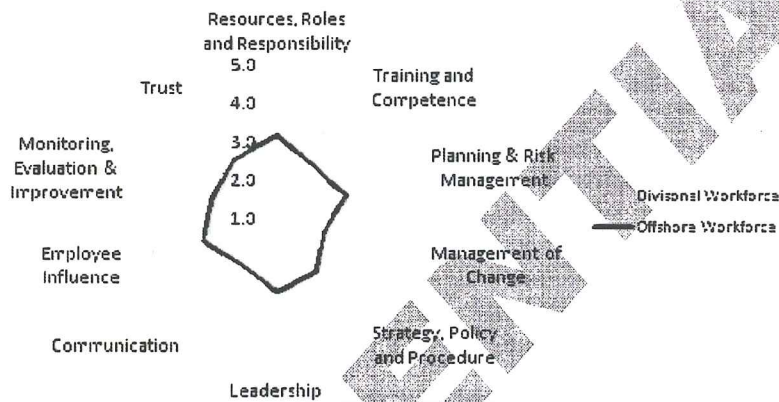

Reviewer Results by Rig/Divisional Employees

Figure 2 clearly indicates that scores for the Divisional office workforce and the offshore workforce are very similar. The scores for the two groups are so similar that the most prevalent differences within any of the domains is a 0.2 variation within 'Training and competence', 'Management of Change' and '2-Way communication'. Such small variations indicate that both the Divisional personnel and rig personnel have similar attitudes relating to the main issues influencing safety culture.

Individual rig results

This section provides a summary of the scores for the four individual rigs that took part in the NAM Division review. This information is illustrated in the spider diagram (Figure 3) and in the table (Table 1) below.

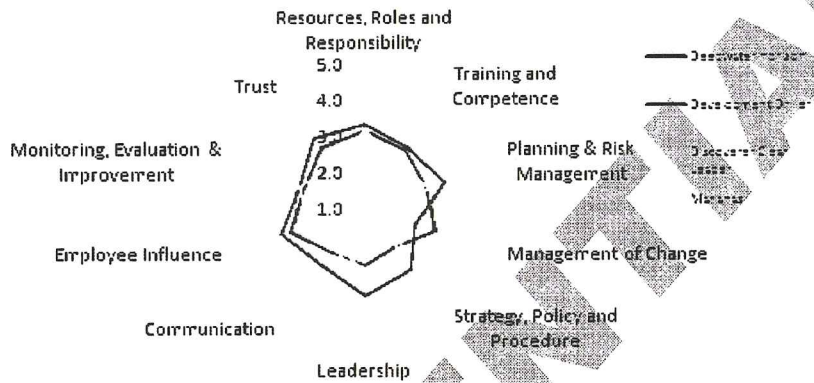Figure 3. NAM Division all locations review data

Table 1. Reviewer results by location

Reviewer results by location	Resources, Roles and Responsibilities	Training and Competence	Planning and Risk Management	Management of Change	Strategy, Policy and Procedures	Leadership	Communication	Employee Influence	Monitoring, Evaluation and Improvement	Trust
Deepwater Horizon	3.3	3.1	3.3	2.5	3.2	3.5	3.0	3.4	2.9	3.4
Development Driller II	3.1	2.9	2.8	3.1	2.4	2.6	2.5	3.2	2.8	3.0
Discoverer Clear Leader	2.9	2.3	2.5	1.9	2.6	2.9	2.3	2.6	2.4	2.5
Marianas	3.2	2.4	2.9	1.9	2.9	2.9	2.5	2.6	2.9	2.4
Difference	0.4									

As both illustrations clearly show, there are substantial variations in the LR EMEA review scores for the four individual rigs and for the Divisional office within all but one of the review domains. The most consistent score was within the 'Resources, Roles and Responsibilities' domain (0.4 variation) whilst the largest variation was within the 'Management of Change' domain (1.2 variation). Development Driller II appeared to have a more tolerant and accepting attitude towards change, including organisational changes like the merger with GSF, compared with the other rigs, such as the Marianas, where 52% (the highest percentage) of participants felt the merger had negatively impacted safety performance.

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Primary issues

The following primary issues were seen as being the key areas for attention in the NAM Division. These are discussed in detail in the NAM Division Report.

- Issue 1: Hazard awareness.
- Issue 2: Risk management processes.
- Issue 3: START in application.
- Issue 4: Learning culture.
- Issue 5: Top down communications.
- Issue 6: H&S Manual.
- Issue 7: Management of Change (MoC).
- Issue 8: Leadership measurement and development.

North America (NAM) perception survey results

Figure 4 shows the results for all NAM data which combines the perception survey data for all participants, including offshore and Divisional employees of Transocean, their clients, and any third party workers. There were 225 NAM participants who took part in the perception survey.

Figure 4. NAM perception survey results
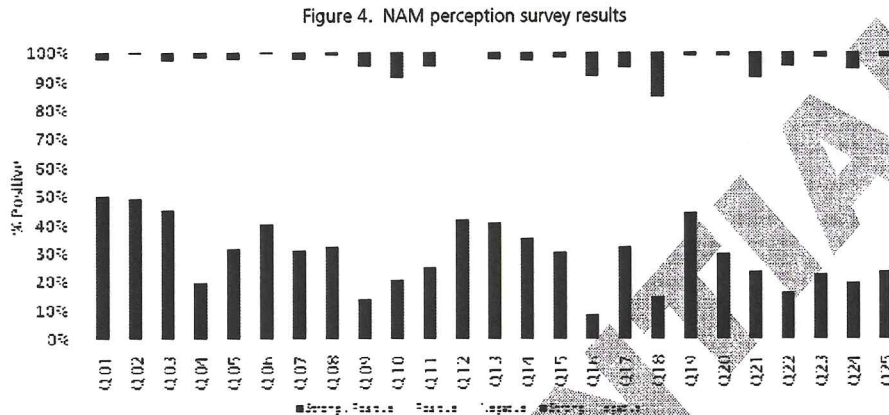
Strengths

Of the twenty-five questions, eight were seen as positive (positive or strongly positive) by more than 90% of the participants. Three of these exceeded 95% positive responses (Q. 2, Q. 8 and Q. 6) meaning that only one in twenty of the participants responded negatively. All of the questions where there was more than 90% positive agreement are shown in Table 2.

Table 2. The most consistent positive perceptions in the NAM Division

Q #	Questions	Area	Strongly Disagree	Disagree	Agree	Strongly Agree	% positive
2	I am encouraged to raise ideas and suggest safer ways to do things at work.	EMP		3.1%	47.6%	48.9%	96.4%
8	I participate in the changes to working practices that affect me.	MoC		3.6%	63.1%	32.4%	95.6%
6	My line manager listens and acts on my safety concerns.	COM		4.0%	55.2%	40.4%	95.5%
12	Because of the training and support I have received, I fully understand the safety procedures and hazards associated with my job.	TRA		7.1%	51.3%	41.5%	92.9%
3	Management feels operational performance (e.g. drilling) is more important than my safety.	LEA	45.1%	46.4%	5.4%		91.5%
15	I must demonstrate that I can do my job safely before I am considered to be competent.	TRA		7.2%	60.4%	30.6%	91.0%
13	There are not sufficient resources (equipment and money) for me to carry out my job, identify and manage risks safely.	RRR	40.6%	50.0%	7.1%		90.6%
19	I feel confident to take shortcuts when carrying out certain tasks.	SPP	44.2%	46.0%	8.5%		90.2%

Key: EMP = Employee influence, MoC = Management of Change, COM = 2-Way communications, TRA = H&S training and competence, LEA = Leadership, RRR = Resources, roles and responsibilities, SPP = Strategies, policies and procedures.

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These results suggest that the majority of the workforce felt they are supported in a number of key areas. For example, only a few participants felt barriers existed in raising safety concerns. There also appears to be a level of trust in line managers resolving the safety concerns. Individuals also felt they participated in the changes to working practices that affected them. Also, nine in ten of the participants did not feel comfortable taking shortcuts in some circumstances.

Results to questions about training and competence indicated that more than 90% of responses were positive. The majority of participants felt they needed to demonstrate their competence. They believed that the training and support they have received has helped them fully understand the safety procedures and hazards associated with their tasks. The latter result is positive in that it showed a level of confidence of participants in procedural knowledge and hazard identification. However, weaknesses in the form of over confidence may exist with only 7.1% of the participants admitting to not fully understanding the hazards associated with their jobs. This issue is discussed in more detail in the Statistics Report.

Questions on leadership and resources were also seen as positive by over 90% of participants. The most important finding with regard to safety culture is that 91.5% of participants disagreed with the statement that management feels operational performance (e.g. drilling) is more important than safety; notably 45.1% of the total 91.5% strongly disagreed with this. Similarly, only 9.4% of participants felt they did not have the resources to manage the risks and carry out their jobs safely. Both these questions are important as they are more reflective of rig management and Transocean generally, rather than just relating to issues within the control of Supervisors.

Weaknesses

Overall there were seven questions in the perception survey for which over a third of the participants did not report positive answers. These are show in Table 3.

The main finding from the results is that both questions relating to Trust were answered negatively by over one third of participants. Less than half of the participants (43.6%) had issues with reporting their actions if they led to a potentially risky situation because of fear of reprisal, whilst 37.7% felt the purpose of investigations was to determine who was to blame and should be disciplined. This is a worrying result as it will undermine reporting and Transocean's ability to learn from mistakes. It is also important to note that Q. 18 relates to rig based reporting while people's perception of Q. 21 is likely to relate to shore based actions (Divisional or Corporate), therefore results indicate trust issues at all levels (in relation to incidents).

Table 3. The weakest perceptions in the NAM Division

Q #	Questions	Area	Strongly Disagree	Disagree	Agree	Strongly Agree	% positive
24	Some of the workforce is uncomfortable with calling a TOFS when unsafe situations occur.	RIG	15.4%	34.7%	40.1%		54.1%
18	If my actions led to a potentially risky situation (e.g. forgetting to do something, damaging equipment, dropping an object from height), I feel I could report this without any fear of reprisal.	TRU		28.0%	41.8%	14.7%	56.4%
9	I am not always informed of the outcome of changes that affect me.	MoC	13.8%	45.3%	36.0%		59.1%
16	Transocean rewards me when I carry out my work safely.	LEA		31.3%	52.1%	8.3%	60.4%
10	There are too many steps in place to manage risks.	PRM	20.4%	40.4%	30.2%		60.9%
21	The purpose of incident investigations is to determine who is to blame and should be disciplined.	TRU	23.6%	38.6%	28.7%		62.3%
22	All the changes in the company i.e. mergers have negatively impacted our safety performance.	MoC	16.1%	50.5%	28.4%		66.5%

Key: RIG = Rig specific questions, TRU = Trust (blame – just culture), MoC = Management of Change, LEA = Leadership, PRM = Planning and risk management.

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Over a third of the participants reported negative responses to two of the three MoC questions (Q. 9 and Q. 22). Both of these questions were used to assess if participants felt Transocean handled change well. The results suggest that a substantial number of participants felt Transocean did not keep them informed of the outcome of changes. Although over a third felt that safety performance was impacted as a result of changes within the organisation, notably over half felt that these changes did not.

The strongest negative perception was that 45.9% of participants believed some personnel were uncomfortable calling a TOFS. From this question, it cannot be deduced that 45.9% of participants feel uncomfortable calling a TOFS, as all participants could be referring to a small number of individuals. However, due to the volume of participants' responses and the fact that this is one of the last defences in preventing both minor and major incidents, these results indicate the ability of the workforce to use TOFS could be a significant barrier to the safe rig based operations.

A substantial proportion (39.1%) of participants felt that there were too many steps in place to manage risk. One factor affecting general negativity towards the risk management processes was the duplication of information and documentation related to Permits, isolation certificates, Prompt cards and THINK Plans. The issue is further complicated by varying expectations and interpretations of the risk management processes, including the level of risk assessment for various tasks. An example frequently cited by participants was development of THINK Plans for simple low risk deck lifts.

Offshore (rig) and onshore (Divisional) personnel comparisons

Figure 5 shows the perception results for onshore and offshore personnel in the NAM Division. There were 207 participants classified as offshore personnel and 18 participants classified as onshore (Divisional) personnel.

As there was a significantly higher number of offshore participants, compared to Divisional based participants, the overall NAM survey results (discussed in the previous section) are more representative of offshore personnel perceptions. Consistent perceptions however, were found in a number of areas for example, Q. 2, Q. 3, Q. 6, Q. 8, Q. 15 and Q. 19 all had over 90% positive agreement for both onshore and offshore participants. In addition, there were also some questions (Q. 9, Q. 10, and Q. 24) where more than one third of participants (both onshore and offshore) recorded negative responses. The perceptual differences between these groups are interesting to note, and these are illustrated in Figure 5.

Figure 5. NAM perception results by onshore/offshore

Comparison of Offshore and Divisonal Workforce Perception Results

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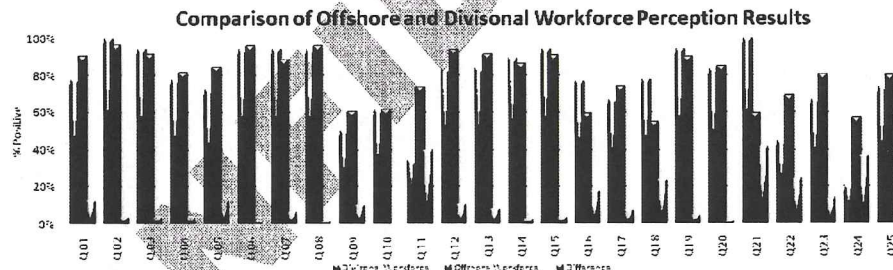
Due to the disproportionate sample size of the offshore and onshore groups, statistical tests were not used to assess significance of any difference. Therefore, any differences of greater than 33.3% between offshore and onshore staff are highlighted in Table 4 and discussed below.

Table 4. Offshore and onshore personnel differences

Q #	Questions	Area	Divisional workforce	Offshore workforce	Difference
21	The purpose of incident investigations is to determine who is to blame and should be disciplined. (% disagree)	TRU	100%	59%	
11	Tasks are not always adequately planned before we start work. (% disagree)	PRM	33%	73%	
24	Some of the workforce is uncomfortable with calling a TOFS when unsafe situations occur. (% disagree)	RIG	20%	57%	

Key: TRU = Trust (blame – just culture), PRM = Planning and risk management, RIG = Rig specific

The greatest difference between the perceptions of onshore and offshore participants related to whether the purpose of incident investigations is to determine who is to blame and should be disciplined (Q. 21). None of the onshore workforce felt the purpose of incidents was to attribute blame whilst 41% of the offshore workforce felt this was the case.

Communication may be a significant contributor to these negative perceptions as there is an incremental decline in positive perceptions the closer a participant is to the frontline workforce (see Figure 6). There is also evidence that suggests offshore participants felt that they were not always informed of the outcome of changes that affect them (Q. 9 – discussed in the 'Weaknesses' section).   With regard to communication, an explanation for the results to Q. 21 may be that investigation outcomes (including justifications for disciplinary action) are not clearly communicated to the workforce, in particular to frontline crew members. A contributing factor may also be those lower down the organisation not having the same level of involvement and thus understanding of the investigation process.

Figure 6. Hierarchical decline on Q. 21
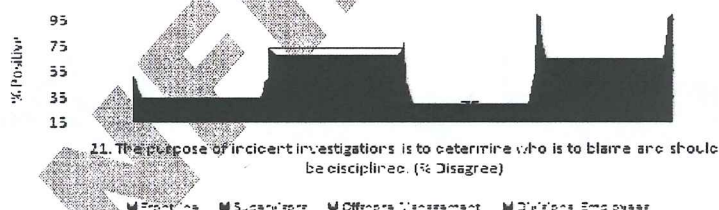
Q. 11 and Q. 24 show a reversal to the above trend, with fewer positive responses from onshore participants compared to the offshore workforce. The most notable was 80% of the onshore participants felt some of the rig workforce was uncomfortable calling a TOFS compared to 43% of offshore participants (Q. 24).   These results indicate that the onshore workforce clearly has little confidence with the ability of the rig based workforce to call a TOFS.

Q. 11 did not show the same level of negativity overall. However there was a greater difference (39.6%) between the offshore and onshore perceptions, with 73% of rig based participants believing that tasks were always adequately planned before starting work, compared to 33% of the onshore participants. This finding is supported by data collected during interviews where some onshore personnel had higher task planning expectations compared to offshore participants.

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Location similarities and differences

To illustrate perceptual trends across locations (the rigs and Divisional office), the perception data was compared for similarities (consistencies) and differences (inconsistencies).

Consistent perceptions between locations

Consistent perceptions were classed as a 10% or less variation between the lowest and highest scoring locations. Results are shown in Figure 7 and suggest there are shared perceptions for Q. 8, Q. 6, Q. 15, and Q. 2, all of which show average positive agreement of over 90%. These are discussed in the 'Strengths' section above.

Figure 7. Consistent perceptions across locations
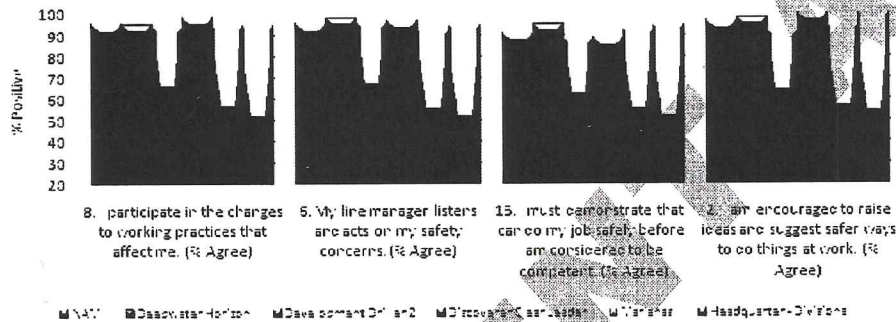
Inconsistent perceptions between locations

Inconsistent perceptions were classed as results showing greater than 33.3% difference between the lowest and highest scoring locations. Questions that met this criterion are shown in Figure 8 and Figure 9.

Figure 8. Inconsistent perceptions across locations

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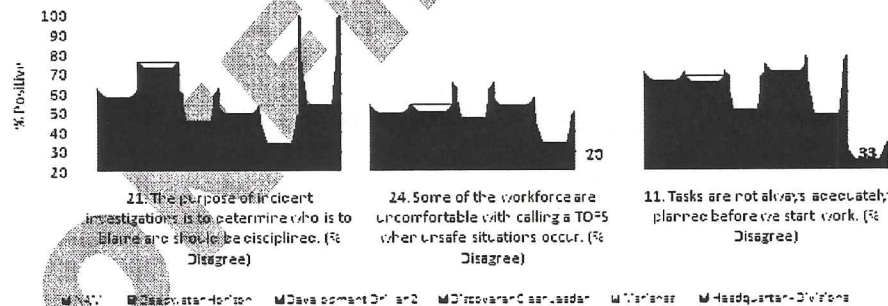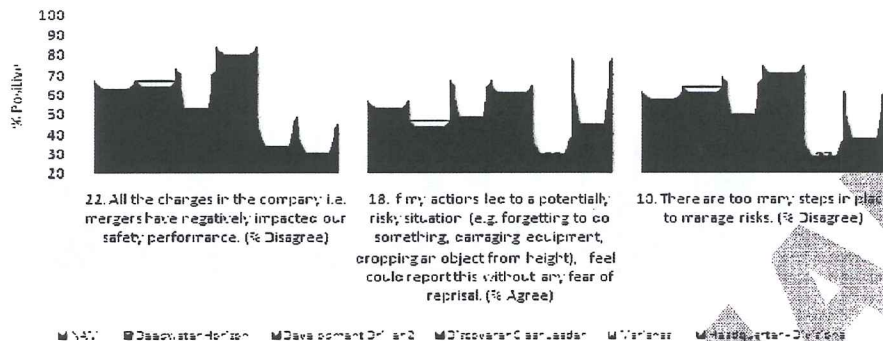
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Figure 9. Inconsistent perceptions across locations continued

The main patterns in the above graphs are that:

- With the exception of Q. 10, the greatest difference between either the highest or the lowest positive perception is with Divisional participants.

- If divisional data is excluded, each rig was the most positive on at least one question.

- With the exception of Divisional perceptions for Q. 21 and Discoverer Clear Leader results for Q. 22, all results were below 80%. This indicates that while these are inconsistent perceptions between locations, in nearly all groups for nearly all questions, at least one in five participants recorded a negative response. Please refer to Figure 11 for more comments relating to inconsistent perceptions.

- With the exception of Q. 11, if Divisional data is excluded, participants on the Marianas were the least positive on all questions.

Organisational level differences

To investigate differences in perceptions at various levels in the organisation, each participant assigned themselves to a hierarchical level in Transocean. These entries were validated by the LR EMEA review team to ensure consistency. The four levels consist of:

- Divisional personnel: i.e. anyone based at a Divisional or sector office (n=18).

- Management: i.e. offshore management which includes the OIM, Nightpusher, Senior Toolpusher (or Toolpusher if no senior exists), Chief Engineer (or equivalent), Captain (or equivalent) (n=18),

- Supervisors: e.g., Maintenance Supervisors, Crane Operators, Tourpushers, Drillers, Assistant Drillers, Chief Mates etc. (n=32).

- Frontline personnel: both skilled e.g. Mechanics, Electricians, RSTCs, Medics etc. and unskilled e.g. Deckhands, Roustabouts, Floorhands, Roughnecks, Painters, Welders, Seamen etc. (n=136).

Collecting this information means the data can be analysed by the hierarchical level of personnel in the organisation. Also because clients and third party staff may have different hierarchical structures in their organisations that were not comparable with Transocean's hierarchy, all client and third party data was removed from this analysis. The following section outlines the main findings for the NAM personnel employed by Transocean.

Consistent perceptions between levels

There were eight questions that showed less than 10% variation between the organisational groups (levels), indicating a relatively consistent view (see Figure 10 and Figure 11). Six of these questions were among the most positive questions in the NAM Division, with only two of these not having a score of above 90% (Q. 14 and Q. 10).

Q. 14 failed to reach 90% positive agreement (88.8%). This indicates weaknesses with regard to the time they felt they had to do their jobs safely. This result adds to concerns raised from Q. 10 where participants consistently agreed on the complexity of risk management processes (Figure 12), as discussed in the previous section.

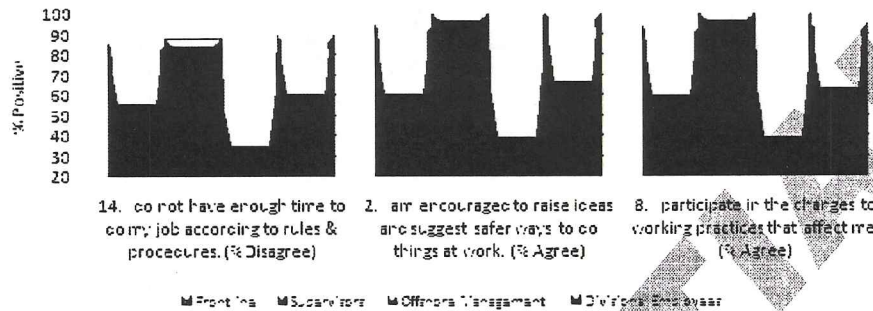Figure 10. The most consistent perceptions between organisational levels

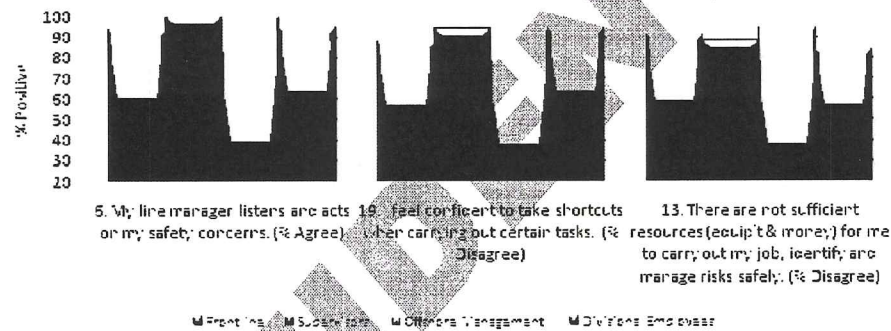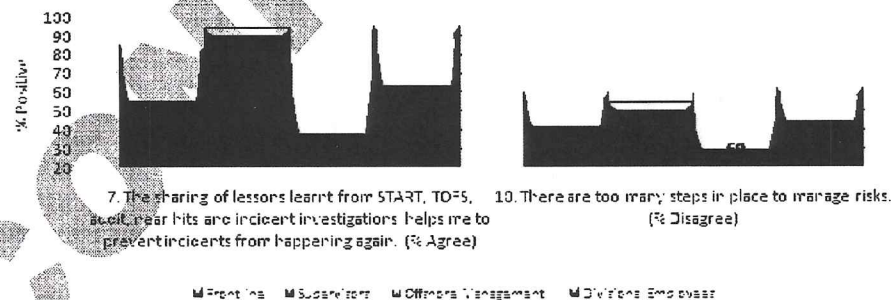Figure 11. The most consistent perceptions between organisational levels continued

Figure 12. The most consistent perceptions between organisational levels continued

Inconsistent perceptions between levels

Figure 13. The most inconsistent perceptions between organisational levels
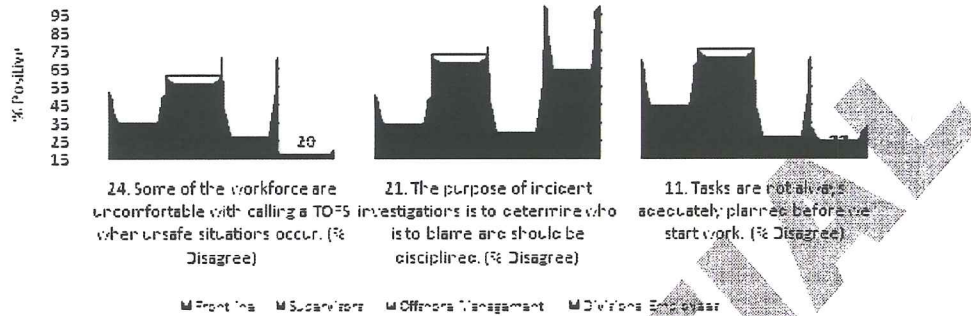

Figure 13 outlines the most conflicting perceptions (i.e. between levels) found in the survey. As illustrated in Figure 13, Q. 24, Q. 21, and Q. 11 show a minimum difference between the lowest and highest scoring groups of 33.3%. More detailed discussion of all these questions can be found in the 'Offshore (rig) and onshore (Divisional) personnel comparisons' section because the greatest differences in all cases were between a rig and Divisional participants. However other patterns in Q. 24, Q. 21 and Q. 11 suggest:

- Of all the rig based participants, the frontline workforce was the least positive.

- Senior rig based personnel appear to be more confident in the application of TOFS than their subordinates. The fact that the most positive group is offshore management indicates some level of disconnect from the participant groups that were most likely to use TOFS, i.e. the frontline workforce and Supervisors. Results from Q. 24 indicate that the onshore workforce clearly have little confidence with the ability of the rig based workforce to call a TOFS. However, the main result is that a substantial proportion of all groups (minimum 28%) felt that some personnel needed support to build their confidence in using TOFS (Q. 24).

- A substantial proportion of all levels (minimum 24%) felt that improvements could be made in pre-job task planning (Q. 11). There was alignment on this question in the perceptions of rig personnel when compared to Divisional personnel. This is discussed in the 'Offshore (rig) and onshore (Divisional) personnel comparisons' section above.

- The proportion of participants agreeing that the purpose of incident investigations is to attribute blame increases the closer (from a hierarchy perspective) the participant is to the frontline workforce.

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