

International Association of Drilling Contractors



Jack-up Committee – Regular Session

October 30, 2014

IADC Offices

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Minutes

1. INTRODUCTION AND WELCOME:

Mike Dowdy opened the meeting at about 9:00 am by providing a summary of the recent IADC Jack-up Committee meetings. Everyone was asked to sign-in on the sign-in sheet at the back of the room and to leave a copy of their business cards.

2. IADC INSTRUCTIONS:

Everyone is reminded of the IADC Antitrust Policy and Guidelines. Copies of this policy were made available for everyone in attendance.

3. IJUC GOING ON/OFF LOCATION:

The chairman gave a very brief opening to the discussion moving to a presentation by the “Joint Rig Committee” (JRC) as the presenters were in the UK. Further discussion would occur once the presentation was complete.

1. James Miller and John Munnings-Tomes jointly provided the Joint Rig Committee (JRC) presentation. The presenters are risk engineers who are working on behalf of the JRC. The JRC wants to be proactive is updating an existing document “JRC Rig Move Warranty Survey”;- “Code of Practice and Scopes of Work”. The draft document is available from the www.lmalloyds.com and a request for review and comment was made by the presenters.

The JRC document covers the full rig move cycle from tow, to going on location, operating, coming off location, and tow from site. This document needed to be updated because of recent “high profile” losses which identified 5 prescriptive criteria required for location approval. The JRC wants and needs to have feedback from all stakeholders.

The purpose of the document is to provide rig movers and warranty surveyors with the parameters that should be addressed for a rig move. The presenters are working on content to be included and markup of the draft. This document has been in existence but with limited use for several reasons that involved the rig owners and clients. Based on experience the major jack-up owners have good procedures in place and the resulting rig moves are successful. This document is primarily to provide a benchmark document for all rig moves so that critical factors are addressed that will result in a safe location approval and rig move.

Reference was made to the environmental limits and guidance on transit in the Marine Operations Manual (MOM) and questioned why additional information is needed. In response it was noted that in many cases the guidance is primarily for operating and not survival. Also, the MOM defines a fictitious “survival storm” which represents a condition where the unit

International Association of Drilling Contractors

would be undamaged. These storms can be used in the site assessment process where site specific data is available. The transit conditions, where they address going on location, typically are limited in scope and over-conservative. Colin Nelson also pointed out that the MOM does not address an analysis case that represents the structural limits for going on location. This is a deficiency in the manual as it is far more likely that the design limits of the leg will occur during a rig move.

Alberto Morandi offered this 2014 draft is much better and easier to use than the previous document. Including the reference to ISO 19905 is an improvement. He also noted that INSAFE and SAFETRAN should not be used in such a rig move procedure as these documents are not publically available.

John Stiff asked what specifically should be considered in a rig move as risk assessment has a broad definition. He asked that everyone provide feedback.

Roger Dutton and Marc Dial noted several concerns with the section on the role of the marine warranty surveyor. JRC Section 1.11 refers to the inspections of the unit, equipment, and vessel that must be carried prior to each tow. This is too broad a requirement as MWS likely will be associated with different tows (location to location, position near platform). This also makes the MWS responsible for all the tows. The MWS should be responsible only for their part of the rig move. This is typically not current practice with drilling contractors. Section 1.13 would appear to conflict with 1.17. The assured is responsible for not allowing a conflict between the MWS and rig move. However, often the MWS will assign one of their personnel to be tow master and rig mover. The assured should be given sole authority for the services the MWS will perform. In Section 1.3 the assured needs some method to ensure the MWS competency is vetted other than the assurance of the MWS. IAMWS is making some progress in clarifying MWS responsibilities but this must be addressed in a formalized set of qualifications.

Malcolm Sharples noted several of the examples in the presentation are not covered by any criteria and in some cases are a result of incompetence. Based on his experience accidents happen because the operation is outside the industry standard. For example, the leg length is too long for the tow planed. People are making errors that did not occur in the past. As a word of caution, the USCG requires that all rigs be operated within the limits as defined in the MOM. This needs to be considered when doing a rig move procedure which will deviate from the MOM.

Jim and James advised the schedule is to have the 1st draft of the document out in 2015 with the final document issued in 2016. Mike Dowdy asked all in attendance to review the document. The ultimate objective is to develop good clear guideline on all issues related to a rig move. The document needs to address floaters in addition to jack-ups and should include going on/off location. All comments should be provided to Dave Lewis who will log them and pass them along for action.

2. Summary of Contractor's Meeting – Going on/off location: The chairman summarized the high points of the meeting held on October 21st. The consensus from the meeting was that a guideline is needed but before one can be created the industry must first define the critical areas that need to be addressed. There are recommendations to include going on/off location

International Association of Drilling Contractors

in future design considerations and this would improve jack-up designs. Consideration of minor changes that improve operating performance could also be considered.

Communications was identified as the one area that could offer immediate improvement to the rig move process. Coming off location with deep penetrations may be a more important issue than going on location. Instrumentation has become economical and could be used to provide some of the parameters in the decision to go into the water to pull legs. The location of the planned site (GoM or North Sea) and infrastructure that will affect the rig move procedure must be considered.

3Dent Technology made a presentation of recent studies for going on location covering four designs. Rowan provided a curve for the Super Gorilla going onto a location in Canada which provided similar results.

Mike Dowdy has asked Dave Lewis to capture critical issues from the meeting, goals, problem areas, and ideas for addressing these issues. When this is completed it will be shared with the IJUC members for comment.

Malcolm Sharples suggested the MOM needs to be reviewed to see if it is inconsistent with current rig move practice.

The focus in the near term should be on the assessment process. An analysis for going on/off location is not simple when compared to the elevated conditions. We also need to better predict the jack-up response in the rig move phases. It was suggested that a position paper may help to move this work forward.

Colin Nelson believed it would be useful to hear from the drilling contractors on what design cases should be considered in a rig design and included in the MOM. He noted there are a number of grey areas such as damping factor and added mass. A sensitivity study of the variables would be useful to narrow the assessment focus on the least number of variables.

Roger Dutton noted that rig moves should be a coordinated effort primarily of the rig owner and the rig mover with contributions from other stakeholders. When developing site specific guidelines for a rig move it is equally important to draw on a rig mover's experience for going on/off location. Special cases are the responsibility of the warranty surveyor but, unless they have been responsible for moving and putting rigs on location, they would benefit from consulting with the rig mover's practical experience dealing with similar problems. In other words, at the end of the day the rig mover must be part of the process.

Micha van der Kraan recommended capturing the experience (lessons learned) from rig moves. Some suggestions were penetrations and RPD during the going on location to capture the full cycle from zero to build up and hopefully back to zero. This effort should also include any special observations for the move (such as punch through during preload) which may occur during the going on/off location when these occurred during the installation cycle.

The question was raised about the Code of Practice's how competency requirement is defined and who will evaluate a person's competency. In a rig move there are different requirements based on the activity being performed. As an example, a person who is competent for tow may not be competent for siting the rig next to a platform, during the preloading procedure, or going back into the water. The installation phase will need someone experienced with

International Association of Drilling Contractors

tagging bottom and when the rig leaves, someone with this phase of rig move would better to assist the warranty surveyor.

4. IJUC REPORTS

1. Hurricane Calibration: Digital structures has completed the dynamics work. This was based on hindcast prediction of the environment at the location. These hindcast values were analyzed using several kinematic predictions. Good correlation was observed between the measured and predicted response. They have also run complete stochastic analysis on the Ensco 69 and some pseudo-static cases to evaluate the results. Digital used 2nd and 3rd order analyses. The 2nd order provided the best response comparison. Digital is assembling these results. The next analysis activities will be for Lewis Engineering Group to do a snap-shot analysis of the unit at the maximum load case to determine the component limits of the system. The assessment limits for the components will be different than a site assessment as this analysis will be based on calculated results (no load factors). The objective is to complete the analysis work in December.
2. Gulf of Mexico Annex: API is working on metocean data based on an approach that is different than used by the GoM Annex committee when this annex was developed. The API metocean group was concerned the approach is not necessarily conservative. John Stiff has had several discussions with this group. As a result they understand our approach represents a slightly different methodology. One concern is that the GoM Annex wave heights are associated with wind speeds that are greater than those at which evacuation is possible. Another concern is that sudden hurricane wind speed with associated wave height may represent a more critical case. John Stiff recommended that we invite Jim Stear or Gene Bereck to the GoM Annex meetings. It may be possible that the GoM will not need to modify our metocean criteria because we are using 50-year events.

API noted that for non TRS areas we need to move to 100-year joint probability and this change should be considered for assessments. The wind force is the dominate metocean forces on a jack-up, therefore the wind velocity selected is important. The CFR refers to 2MET for choosing metocean forces, BSEE language is general but this should be considered when modifying the GoM Annex. The GoM Annex committee needs to sort out the critical requirements and update the annex.

5. NOVEMBER MEETINGS – OGP/ISO19905

1. OGP/ISO 19905 Panel and General Meetings: Mike Hoyle reviewed the dates for the meetings of WG7 and its Panels. He noted Panel 53 Floaters would be held on Friday and encouraged all the drilling contractors who have floating units to stay and participate in John Stiff's panel. He also advised that it was necessary to schedule the Panel 5 Seismic after the WG7 meeting on Wednesday and suggested travel arrangements be made accordingly. There will also be an OGP/ISO 19901-2 Seismic meeting on Thursday. This is part of the general requirements suite of standards and is the reference for the ISO 19905 seismic clause.

Mike Hoyle emphasized his parent committee TC67/SC7 has gone on record that a going on/off location document which covers the time from when the unit arrives to when it leaves a site is necessary. This document should include all issues related to lowering legs while afloat,

International Association of Drilling Contractors

preloading, elevating at the location, and going back into the water. SC7 consider this important, so it is likely to happen with or without WG7 as the project owner. Mike noted when this becomes a new work item all work must be completed (FDIS) in 3-years. He suggested the best approach is to do as much work as possible before it becomes a work item and SC7 is agreeable to this approach. However, this approach also means we must get started or SC7 may believe we are stalling.

BP, Shell, and others who contract rigs need this document. If WG7 does not address the issue, then SC7 will find someone that will be willing to develop the standard. Towing of jack-ups is unique but is covered by other documents. BP has tightened up existing documents for rig transit and is looking for something that covers the other aspects of putting a rig on location.

The IJUC chairman believes it would be useful to have one document that addresses the going on/off location issues. He also strongly believes IJUC is the best forum to create this document.

2. OGP/ISO 19905 Panel 5 Seismic Study: The benchmark review of the seismic clause has shown the current maps result in too many jack-ups falling into areas where a higher level seismic analysis is required. The consensus is these maps do not reflect that actual seismic risk to jack-ups. The panel working on ISO 19901-2 has proposed a JIP to revise these maps. Hopefully this will be funded. Another area that needs to be addressed is the “effective soil” used in determining the jack-up frequency for the seismic event. John Stiff and Doug Stock are going over the benchmark report with the purpose of developing a plan to go forward.
3. OGP/ISO 19905 – 3 Floating Panel 53: John Stiff gave a brief overview of the standard noting the document is structured to point the user to other standards on how to address floating MOUs. This document is available for anyone who is willing to contribute to the standard.

6. MEETING CONCLUSION

The meeting concluded with the notice of the next meeting and the host.

Location: IADC Offices

Date (rev): Changed to March 12th 2015

Host: Ensco

7. REFERENCES

The following documents represent presentations at the meeting, documents distributed at the meeting, or references related to subjects discussed. These documents are available under the resource tab for the IADC jack-up committee.

1. IADC Presentation (LMA); JRC MOU Location & Move Warranty Survey Scope of Work
2. JRC Rig Move Warranty Survey
3. TSAC Subcommittee Task 14-01 MODU Kulluk TOI Final Report, Towing Safety Advisory Committee, Task 14-01, “Review of and recommendations based on the report of Investigation Into the Grounding of the Mobile Offshore Drilling Unit (MODU) Kulluk”, November 3, 2014