RED ZONE MANAGEMENT

Best Practice for Stand Alone Operations

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SUMMARY

1. DROPS Focus in Shell culture
2. Red Zone Management Through The Rig
3. Red Zone Management – Stand Alone
4. Schlumberger
5. Expro
6. Recap
7. Questions / Comments
DROPS IN SHELL CULTURE

• High focus at the most senior levels
• DROPS Focal Points – every OU / LoB
• Training – CBT and Face-to-Face
• DROPS Manual – right
• Part of Global Wells Manuals suite
• Prevention, mitigation & controls from:
  • International Association of Oil & Gas Producers (IOGP)
  • DROPS Online Global Expertise Centre
  • Step Change In Safety
• Shell and Contractors accountable/responsible to keep all staff safe
• Shell wells site supervisors verify that all key controls are in place
• All operations planned according to the Global Well Delivery Process
• This provides assurance at each stage of the design or ops planning
• ALARP must be proven at each Decision Gate
• DROPS focus during Define, Execute and Operate risk assessments
RED ZONE MANAGEMENT

- Major effort in Red Zone training in Shell world wide
- Definitions
  - No-Go Zones - high potential risk for drops. Controlled by PTW and be marked / barriered-off at all times
  - Red Zones - medium potential risk for drops. PIC accountable for permitting personnel to enter. Adjacent step back safety zones with fixed gated access points to Red Zones
- To date, most of focus has been on through the rig operations
STAND ALONE OPERATIONS

- Different to rig operations in that each rig-up may be unique
- Temporary equipment, possibly unfamiliar surroundings
- No-Go and Red Zones also temporary and variable in area
- Zones may be on multiple levels rather than just a drill floor
- Wider range of objects being elevated to a height
- Multiple means of lifting, rather than just the drawworks
Section 13 Wireline Operations

Limited coverage. Discusses mast and gin pole operations.

DROPS focus is principally on the guy lines rather than the crew.

Figure 1—Guyline Anchor Locations Outside the Fall Zones

Note: Not to scale.

A = Guyline anchor
B = Well servicing unit
C = Wellhead
“Safety Of Wireline Operations”: Detailed best practice for wireline operation but does not specifically address Red Zone Management.

Also includes a Wireline Specific Lifting Plan which mentions bariered-off and safe areas but does not define the zones or give guidance on how to demarcate.
RECOMMENDED GUIDELINES FOR ........RED ZONES

• Recommended Guidelines for the use of Restricted Access Areas (Red Zones)
• Defines Red, Yellow & Green Zones
• Guidelines for zone demarcation and management
• Good summary of best practice
• Preliminary checks – Lifting equipment
• PTW, JHA & Lift Plan
• Communications
  • All parties- the wire line operator, crane driver and where applicable the tugger operator engaged
  • Agree who will provide the signals – wireline banksman
  • Agree “All stop” signal (part of lift plan).
  • Agree that the wire line operator is in charge of the lift
  • Carry out toolbox talk – everyone affected not just the wire line crew
• Red Zone must include ‘Bounce Zone’
• In many cases, tower height is significant
• Bigger lifts, using a crane
• Men working at height when making up BHA and stabbing the injector
HWU OPERATIONS

- Often very tall structures
- Equipment hoisted to the workbasket using the gin pole
- Concurrent activities at more than one level on the tower
### Location DROPS Risk Register

<table>
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<th>Item</th>
<th>Photograph</th>
<th>Item Description</th>
<th>Risk ID</th>
<th>Risk Level</th>
<th>Primary Inspection</th>
<th>Secondary Inspection</th>
<th>Inspection Criteria</th>
<th>Condition</th>
<th>Frequency</th>
<th>Required</th>
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<tr>
<td>4</td>
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<td>Poor</td>
<td>Daily</td>
<td>Low</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Images of detailed sections of the register are also included.*
Site DROPS Map
Red Zones / Restricted Access Areas

- Permission to enter
- Step Back Safety Zones
- Access diagrams posted

Understanding and Preventing Dropped Objects
CURRENT SHELL FOCUS

Through the sharing and dissemination of Best Practice, we want to develop:

• A standardised approach to the assessment of risk in stand-alone operations
• Consistent methodology in the demarcation of Red and No-Go Zones
• Common philosophy for zonal management and control
• Uniform procedures for the control of lifts and tower erection
SUMMARY

- DROPS prevention is at the core of Shell well operations
- We currently employ Best Practice as seen from an internal perspective
- Stand-alone operations have not had the same attention to detail as through-the-rig
- The Well Service Community would benefit from the sharing of best practice and the standardisation of Red Zone Management
Questions / Comments ?

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