# Drops onshore in PNG

Are we managing them?

# What I will discuss

- What do we have to manage drops?
- Drops incidents in HAES
- Collectively, what else can we do?

# How we manage Drops

- Drops Surveys
  - Specific to each rig
  - Each section is colour coded
  - Reviewed as amended as required
- Drops Inspections
  - Coincide with Drops Survey
  - Formally conducted weekly, monthly and post jarring
  - Informally conducted daily or as required

## Crown Section (Incl Casing platform)

| Ref | Equipment / Area | Fastening Method | Tag Number | Risks | Control | Photo |
|---|---|---|---|---|---|---|
| 1 | Deadman Sheave ODS | Secured with safety lock bearing pin. Pin secured with 3 x bolts with bolt head moused off on each side of the bearing pins. Main shaft is tie wired between nuts | A01 | Low | A quick visual inspection will be conducted weekly by the Derrickman. An inspection will also occur when greasing the crown sheaves and/or prior to raising or lowering Derrick.<br><br>A formal recorded inspection will be conducted by the AD/Driller monthly or early as the operation dictates<br><br>See the "Drop Objects Monthly Inspection Sheet" |  |
| 2 | Deadman Sheave Jumper Bar | Jumper Bar support plate is secured to a support brace with is secured to the Crown Frame with bolt, locking nut, spring washer and clip. | A02 | Low | | See picture above |
| 3 | Fast line Sheave DS | Secured with safety lock bearing pin. Pin secured with 3 x bolts with bolt head moused off on each side of the bearing pins. Main shaft is tie wired between nuts | A03 | Low | |  |
| 4 | Fast line Sheave Jumper Bar | Jumper Bar support plate is secured to a support brace with is secured to the Crown Frame with bolt, locking nut, spring washer and clip. | A04 | Low | | See picture above |
| 5 | Cross Over Sheave | Secured with safety lock bearing pin. Pin secured with 3 x bolts with bolt head moused off on each side of the bearing pins. Main shaft is tie wired between nuts | A05 | Low | |  |
| 6 | Cross Over Sheave Jumper Bar | Jumper Bar support plate is secured to a support brace with is secured to the Crown Frame with bolt, locking nut, spring washer and clip. | A06 | Low | | See picture above |

# Rig 103 Dropped Object Monthly Inspection

(Log all Drop inspections in the IADC Report)

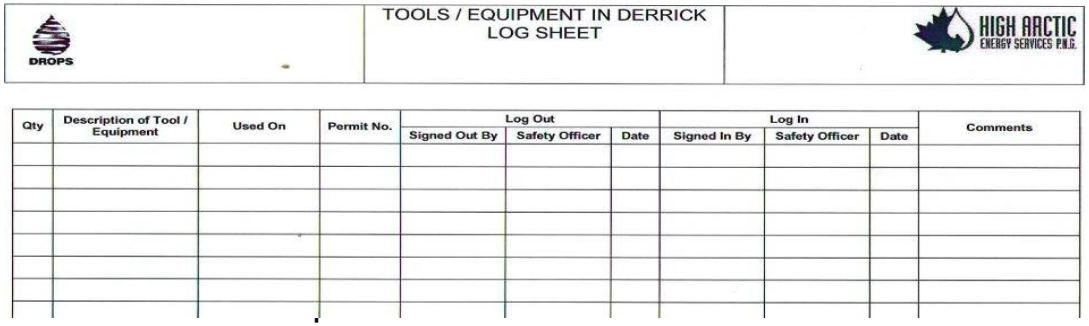
Items identified which require rectification and cannot be action and rectified at the time of the inspection are to be carried over to the rigs Corrective Action Register. Each item is to be monitored through to closure.

| | | | |
|---|---|---|---|
| **Date** | | **Currently Drilling Operation** | |
| **Inspector(s) Name** | | **Position** | |

| Crown and Casing Board | | | | | |
|---|---|---|---|---|---|
| **Ref** | **Equipment / Area** | **Inspection Criteria** | **OK** | **Action reqd** | **What action was required** |
| 1 | All Crown and Casing Platform Sheaves | Check that main shaft is tie wired between nuts | | | |
| | | Check all bolt are tight and moused | | | |
| | | Check safety lines is attached and in good condition | | | |
| 2 | Crown Sheave Jumper Bars | Check support locking nuts, spring washer on both sides are tight. | | | |
| 3 | Derrick Fall Arrestor Post | Check post is recessed fully and secured by a pin and safety pinned both sides. | | | |
| 4 | Strobe Light Casing Platform | Check all 4 nut and bolts to face plate are tight | | | |

# How we manage Drops

- Purpose built Drops Toolbox
  - Each rig has there own
  - Kept in the Safety Office
  - Tools ONLY used for working at heights i.e. above the rig floor in the sub base.
  - Controlled under the PTW system
  - All tools logged in/out



DROPS

TOOLS / EQUIPMENT IN DERRICK
LOG SHEET

HIGH ARCTIC ENERGY SERVICES P.N.G.

| Qty | Description of Tool / Equipment | Used On | Permit No. | Log Out | | | Log In | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Signed Out By | Safety Officer | Date | Signed In By | Safety Officer | Date | |
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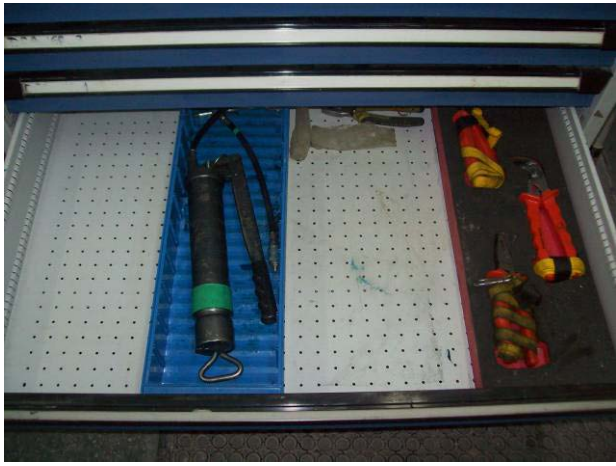
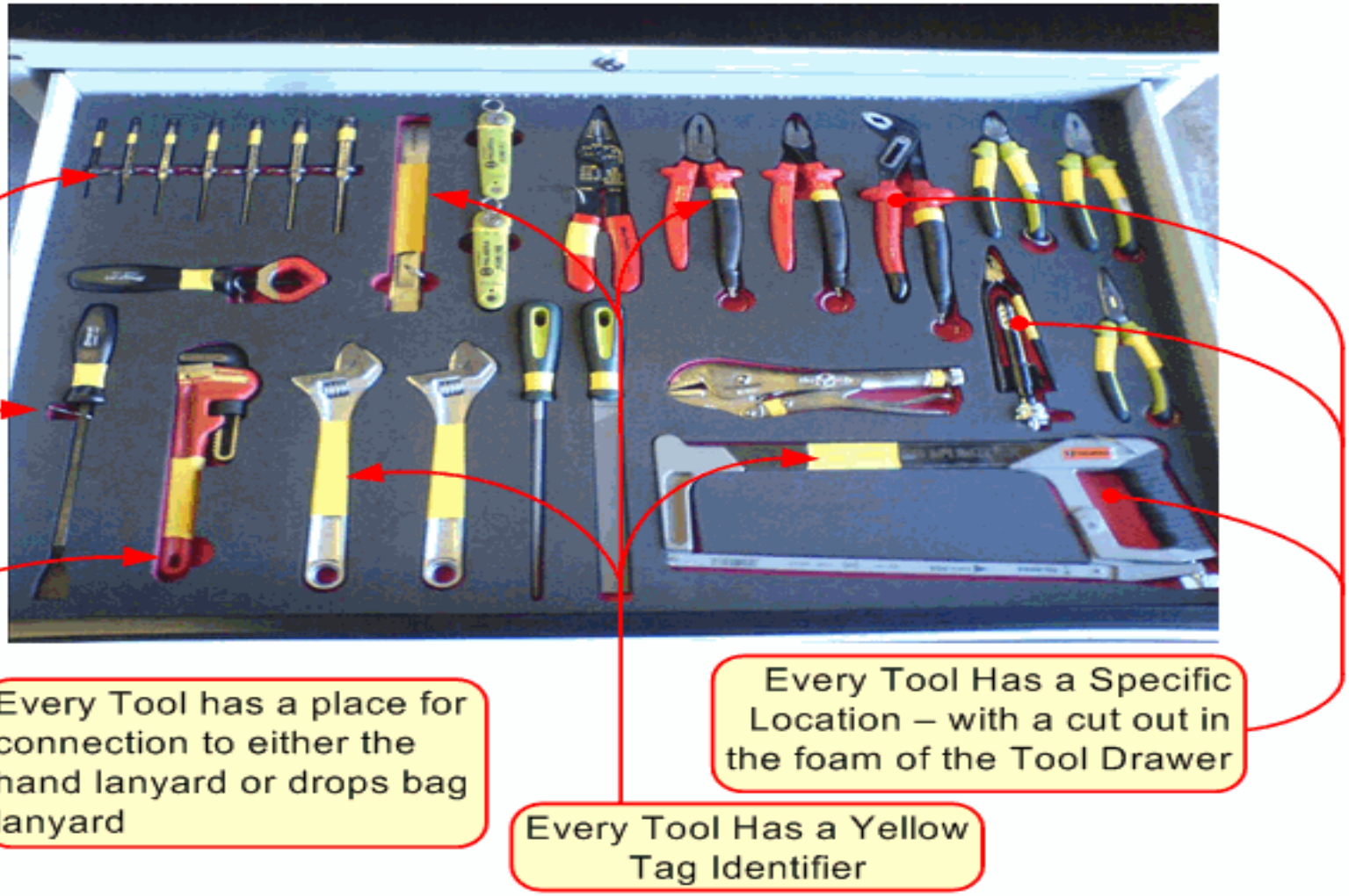
DROPS



DROPS

Drops Forum Perth 3rd Nov 11


Every Tool has a place for connection to either the hand lanyard or drops bag lanyard
Every Tool Has a Specific Location – with a cut out in the foam of the Tool Drawer
Every Tool Has a Yellow Tag Identifier

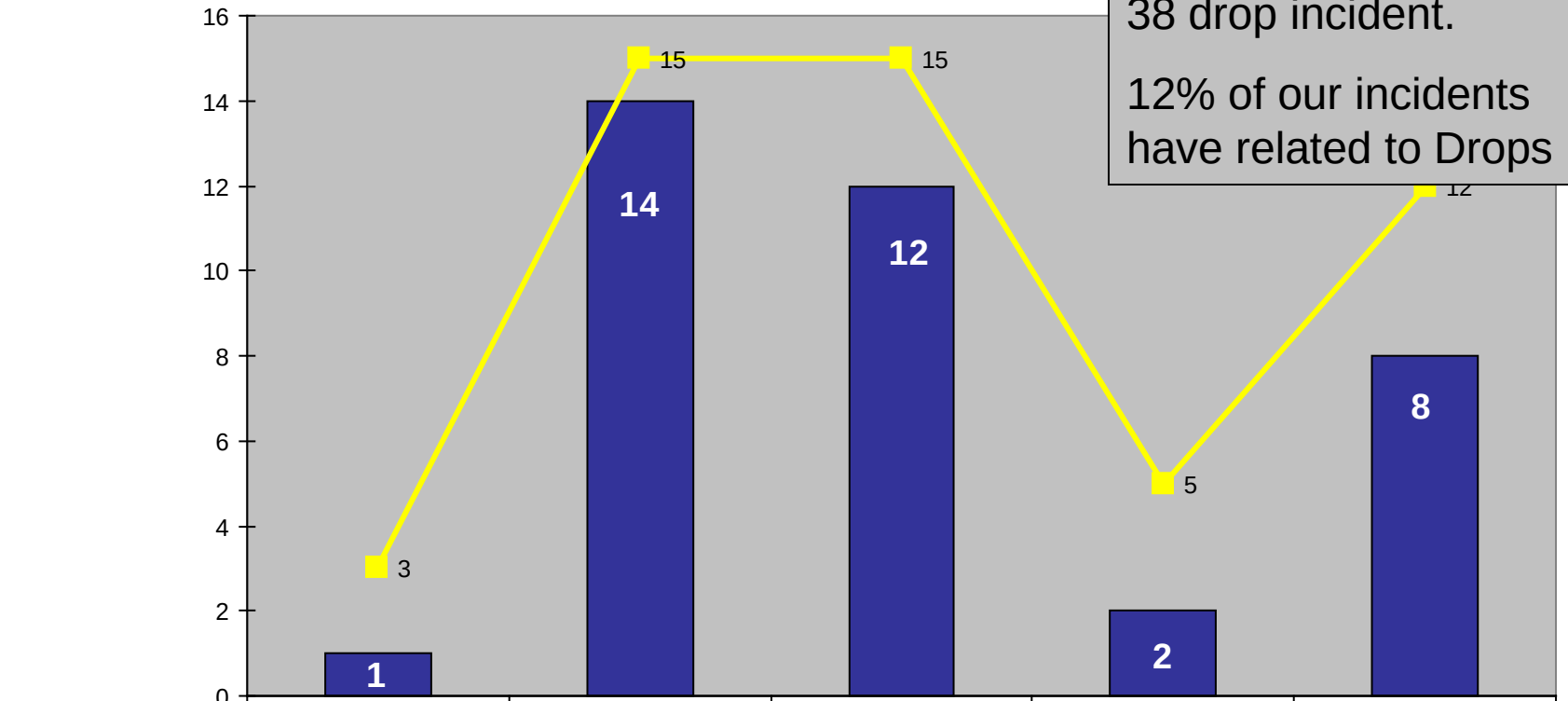
# How we manage Drops

- Policy, procedures and training
  - We have a governing Drops Procedure
  - Specific Drops Procedures
  - Drops Training conducted for all new employees.
  - Actively use the Drops Calculator for all drops incidents.

# So why are there still drops?

Overall 2007 – 2011
38 drop incident.

12% of our incidents have related to Drops




| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Drops Incidents | 1 | 14 | 12 | 2 | 8 |
| Percentage | 3 | 15 | 15 | 5 | 12 |

# Other statistics

- Incident Breakdown - 29 NMS, 8 Damage, 1 FAC
- 7 of the 38 related to dropped tools or equipment
- **8 drops related to OEM equipment which could have been better designed.**
- 3 related to dropped casing/tubing down v-door caused by procedures not followed or known.
- 2 were loads from trucks
- 3 related to parted winch lines.
- 1 related to the side of a PCH house that flew off during rig move flying

# What else can we do

- We have good drops surveys, inspections, training, procedures.
- Drops is so well educated everyone is more than aware – something may drop.
- Have we become too aware and less proactive.
- Are OEM's actively trying to reduce drops objects.  21 percent of our incident could have been avoided if better designed by the OEM.

# Thank you