LOADING CROWN SHEAVES INTO FLY BASKET RESULTS IN LOST TIME INCIDENT

Drillsafe
Brisbane
7th June 2012

INTRODUCTION

- This presentation looks into the circumstances leading to and the causes of the Leap Frog Driller being caught between two Crown Sheave clusters when loading into the Fly Basket.
- The resultant injury was two deep lacerations and one deep puncture wound to right leg calf region.
- The incident occurred at P'nyang Rig 103 on Wednesday, 11th January 2012 at approximately 10.50am.
- The injury classification was a Lost Time Incident.

INCIDENT DETAILS

- What happened
  - IP caught between two Crown Sheave clusters when loading into a Fly basket
- Consequences
  - Two deep lacerations and one puncture wound to the right leg calf region.
- People involved
  - LF Driller
  - Crane Operator
  - Columbia Loadmaster

SEQUENCE OF EVENTS

The main task for the day was to erect the camp roof. The camp was separated from the rig site by a short distance.

Erecting the roof was expected to take the whole day and involved all Leap Frog (LF) crew members accept the Senior Mechanic and Crane Operator who were at the rig site conducting maintenance.

When the LF Driller got to the rig site he started loading the four crown sheaves on to a fly skid assisted by the Senior Mechanic and crane operator.

The decision to load the sheaves onto the fly skids was made by the LF Driller because the Columbia Load Master where not there at the time.

The Columbia Load Master later said the Crown Sheaves would need to be moved into the fly basket.

DY (wooden planks) were placed in the fly basket to rest the sheaves on. The DY was stacked 3 high along both sides of the basket running from front of the basket to the back.

The first two sheaves were loaded into the fly basket using two soft slings hooked to the crane. The slings were run through two eyelets on either side of the sheave.

The first sheave was a 3 cluster sheave. The next sheave was a single sheave.

The Columbia Load master was directing the crane and a single tag line was in use.

The next sheave to be picked up was the 2 cluster sheave (the sheave causing the injury).

The sheave was still fitted with the line jumper bar, shaft and the bearing. A tag line was fitted but unlike the first two sheaves, only one soft sling was fitted to pick it up.

Before lifting the sheave, the Columbia loadmaster went to the LF Driller with the second soft sling, but he was told by the Driller that he didn't want to use it for this lift.

The loadmaster never questioned why the job had changed and returned to the basket.

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When the sheave was vertical inside the basket, the line bumper which was not as wide as the two positioned rows of DY, sat inside the boards resting on the basket grated bottom.

The Driller, was positioned between the vertical sheave and the sheaves already lowered on the DY.

His two legs straddle the right hand row of DY with his right leg inside between the two DY rows.

His two hands were on top of the sheaves so that he could guide the sheave as it was lowered.

What happened next could not be fully determined other than the sheave turned and caught the Drillers right leg around his calf.

The resultant injury was a 7 cm laceration, a 5 cm laceration and the puncture wound. What actually caused the injuries was also not clearly determined other than it is likely it was the angle bracket and/associated fitted nuts and bolts on the sheave itself.

The crane operator saw the sheave turn towards the Driller and immediately picked up on the sheave to try to stop it hitting him.

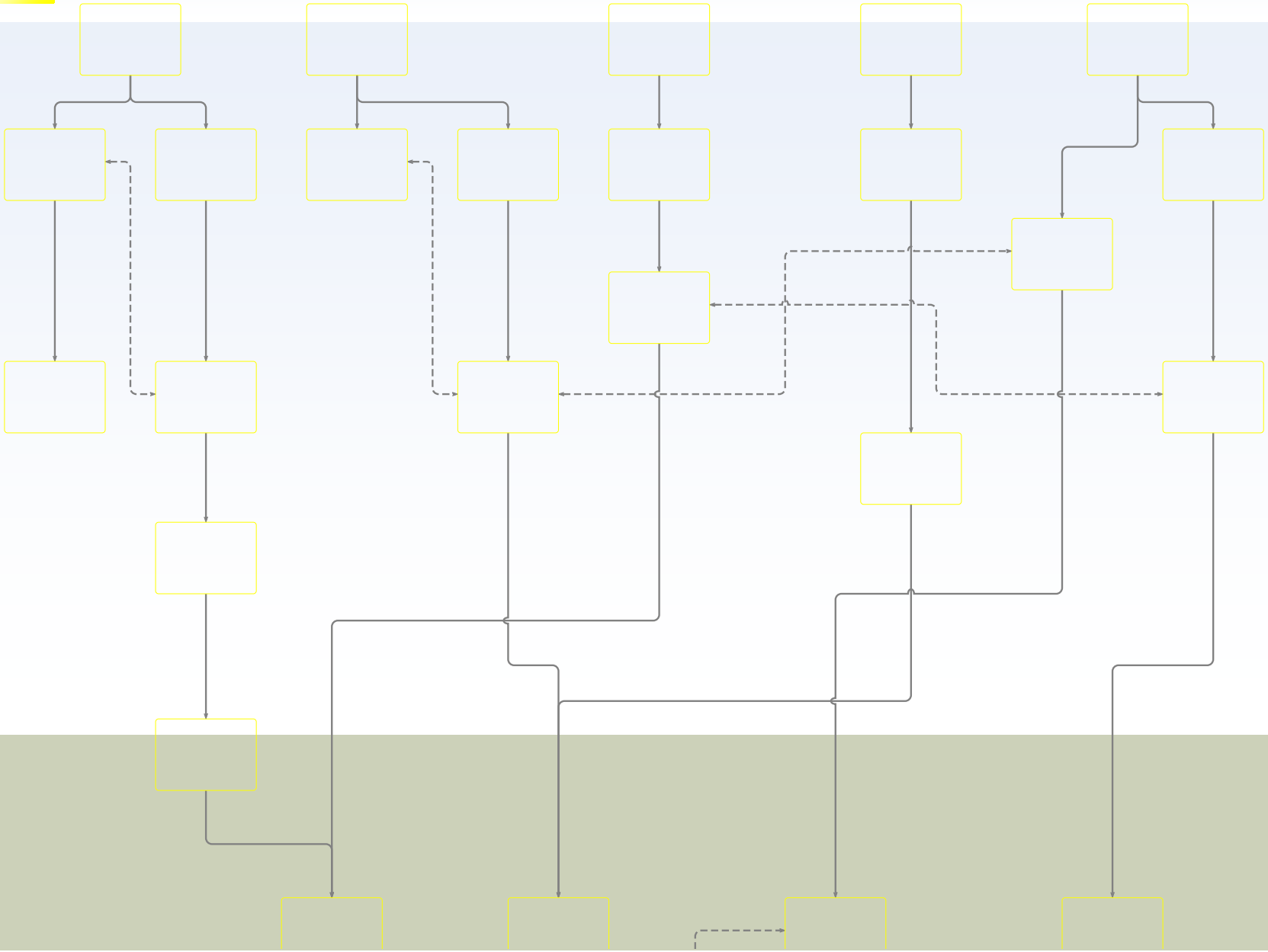
The Driller's leg was not trapped and he was able to climb out of the basket and walk around to shake off the pain.

It was then that others noticed blood on the right leg of his coveralls.

The medic was contacted and the Driller was stretchered to the clinic.

POST INCIDENT

- Later that day IP was evacuated to Moro and onwards to Cairns Base Hosptial for treatment.
- He spent 7 days in hospital and another 11 days in a Cairns hotel recovering before he could travel.
- HAES flew his wife from Canada to be with him.
- IP was cleared to travel on the 31st January. On advice from the treating doctor, the IP was given an injection to prevent DVT during his flight home.
- HAES arranged return business flights for IP and his wife. Both left the 1st February.
- IP return to work on his normal shift 4 weeks later. No problems encountered to date.
- Full investigation was completed. Corrective actions were put in place to prevent any reoccurrence.



INCIDENT CAUSES

- **Immediate causes**
  - Driller went to the rig site to work rather than observe camp roof being erected.
  - Sheave picked up the 2nd time.
  - Person in the fly basket.
  - No one stopped the job.
- **Root Causes**
  - Poor communications. Job roles not clearly defined.
  - Lack of hazard and situational awareness.
  - No positive intervention when job changed.
  - Inadequate task planning with all work party.

CORRECTIVE ACTIONS

Corrective Action	Status
Conduct a road show around all High Arctic locations with the injured person so that he can share his learning's from the incident and how the injury impacted on his work and personal life.	Still pending
Develop an industry safety alert so that a brief summary of the learning's could be shared both internally and externally of High Arctic.	Completed
Introduce a policy that forbids anyone from entering a fly basket or any other rig equipment basket whilst equipment is being lowered into or lifted out of the basket by any type of rolling stock so that the likelihood of caught between or crush incident is eliminated. Entry into baskets will be permitted to hook or unhook loads but only when all movement of the load has ceased.	Completed
This incident had failings in all of these three common incident areas i.e. poor or no planning, communications and hazard awareness. These failings have been common to recent incidents and are being addressed continuously. The HSE Improvement Plan for 2012 is focused on improving Supervisors active monitoring and to drive them into the HSE tools available to them and crews.	Ongoing

HIGH ARCTIC ENERGY SERVICES P.N.G.

HSE Memo

To: All Rigs

From: HSE Manager

Date: 11th February 2013

Re: 12/002 – NO ENTRY DRILLING BASKETS DURING LOADING OR UNLOADING

We recently had a serious incident which resulted in two deep lacerations to an employee's leg when he was caught between two crown sheaves inside a fly basket. One of the sheaves was in position and the other was being lowered into the basket by the crane. The consequences from this incident has prompted a change to restrict entry into fly or drilling baskets to ensure that no one else gets hurt. This change is effective immediately.

From this point on;

- **NO ENTRY** is permitted into any type of equipment basket while there is a suspended load being lowered into or removed by either a crane or forklift.
- Those involved in the job **MUST** keep well clear of the suspended load and the crane operator is to be fully aware of your position at all times.
- A minimum of one tag line is to be used to control the load in and out of the basket. The tag line is to be long enough to keep the tag man clear of the load but still able to control the load.
- Loads slung on a sling under on forklift tyne(s) are to rigged up so that there is no likely damage to the sling from the sharp forklift tynes edges i.e. separated by rubber or cardboard.

Entry into a fly or drilling basket is permitted:

- Anytime when there is no loading or unloading of equipment using a crane or forklift.
- After the load has been positioned by a crane or forklift to unhook slings.
- Prior to any lift with the crane or forklift to enable the sling(s) to be connected. *There is to be NO movement of the crane or forklift until the person has left the basket.*

Please pass on this new work policy to all crew members at upcoming safety meetings. Continue to pass on this message until everyone at your site has heard it. A copy of this memorandum is to be prominently displayed at the rig site in the meeting area.

This information from this memorandum and all other information relevant to working in drilling type baskets will be developed into a new JSA. The JSA will be ready for use by close of business Sunday '1

Kevin Rollins
HSE Manager
High Arctic

HIGH ARCTIC ENERGY SERVICES P.N.G.

'Hands Free' Lifting & Loads Handling Policy

What is It & Why We Need Hands-Free?

High Arctic Energy Services PNG (HAES) is committed to achieving the goal of an Injury Free Workplace. A significant part of past workplace injuries in HAES operations has been injuries to hands whilst lift and handling loads. The best way to achieve reductions in the risk of injury is to eliminate the hazard. We cannot eliminate all lifting but we can eliminate a large majority of the physical handling of loads to significantly reduce hand and feet injury potential.
Like flying, the most hazardous parts of a lifting operation are lifting off and landing, therefore, at these critical stages, all personnel must be as far away from the load as possible in case something does go wrong. To ensure this happens, it is essential to adopt a "hands-free" policy that is rigidly adhered to.
However, there will always be certain jobs which will require "hands-on" for final positioning but these should be treated as exceptions and not as routine and, as such, fully addressed in the risk assessment (JSA) process, paying special attention to the risk of injury to fingers & hands, toes and feet when handling loads.

What do we need to be able to achieve "hands-free" lifting & load handling?

Just three things!
1 The correct mindset
2 Tag lines
3 Push / Pull Poles

1 The Correct Mindset

Changing the way we have done things for many years will always incur an element of "resistance" from some people who may be 'set in their ways' or just resistant to change. To continually improve safety performance we have to persevere with fresh ideas or we will never change things for the better. *If we always do what we've always done, we'll always get what we've always got – injuries!*

…es is and always will be a debatable point but the …opinion is that although their use can introduce …nal hazards in some circumstances, their use …eases the safety of the lifting and handling loads. …advantages and disadvantages (Hazards & Risks) …be properly considered and their use …y an adequate JSA (risk assessment).

Memos distributed to all rigs.

2 x Push / Pull rods distributed to all locations

ANY QUESTIONS

THANK YOU