

Nexus Energy Limited

HSE Challenges during our Longtom Drilling Campaign

- Two Nexus wells in this phase; one exploration and one development
- New build Jack-Up – Seadrill West Triton – built in Singapore
- Rig contracted via rig consortium consisting of five Operators
- Rig commenced work in Feb '08 and drilled five short wells for other Operators in Bass Strait in three months
- Nexus operations commenced in May '08 with Garfish-1
- Garfish-1 was a vertical exploration well, designed to be a keeper if successful – subsea wellhead with HP riser
- Longtom-4 was a challenging, extended reach, horizontal development well with subsea christmas tree and “smart” completion

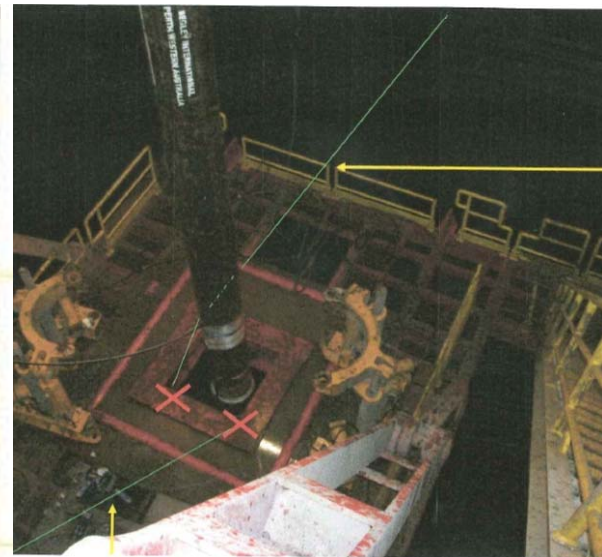
■ Safety - Initial period

- We knew that HSE was going to be challenge with a new rig, a relatively new Contractor, chronic shortage of experienced personnel & relative remoteness of Bass Strait operations.
- Even with the shakedown period with other consortium members, it quickly became apparent that Nexus faced significant HSE and operational challenges.
- Within the first nine weeks we incurred three medical treatments and two high potential (Hi Po) near miss incidents
- The two near miss incidents were of particular concern because they were high potential near misses (HiPo) that may have resulted in a fatality with a small change in circumstance.

■ The incident

- The first Hi Po incident occurred on Garfish-1 on the 2nd June 2008, while running the 22in HP riser.
- A floorman inadvertently removed a pin from a 30 inch bowl, allowing the split bowl to open and allowing two 22 inch inserts to fall through the gap in the rotary table between the riser and bowl.
- One insert fell to the Texas Deck below and punched through the grating platform into the sea. A second insert fell into a drip pan directly below the rotary table.
- Two people were working on the Texas deck close to where the 250kg insert punched through the grating.

High Potential Near Miss 1



Cameron inertia line at time of incident,

Floor hand inertia line at time of incident

- **Formal Investigation – Key Findings & Corrective Actions**
 - **Poor planning process (including quality of JSA and PTW) – process reinforced and refresher training conducted**
 - **Insufficient level of communication between personnel - reinforce responsibilities of contractor supervision with contractor specific equipment.**
 - **The level of leadership and supervision on the rig was insufficient + poor level of training and experience of personnel + large proportion of green hands (70-80%) + high turnover of crew and supervisors - Conduct Tempo Training for all staff ; implement Seadrill “HSE Step Change“ programme; initiate discussions to reduce turnover**
 - **Inadequate design of bowl and inserts – attached safety line to inserts**
- **Note that Nexus formally investigates all serious incidents with a multi-company team lead by an “outside” facilitator.**

High Potential Near Miss 2

- The incident
 - Member of the scaffolding crew opened a hatch on the cantilever deck and left the hatch open whilst working below.
 - A drill crew member walking aft along the cantilever stepped through the open grate hatch, but was able to check his fall and only partially fell through the grate (potential fall of fifteen feet).
 - His injuries were minor (First Aid) and the drill crew member was able to return to work with no restriction to his work.



High Potential Near Miss 2



- **Formal Investigation – Key Findings & Corrective Actions**
 - **PTW system not fully implemented & pre job planning process inadequate - the sub contract scaffold team prepared the JSA in isolation with no Seadrill supervisory input**
 - **Supervision of third party sub contractors inadequate & Guidelines for Managing Contractors per the Seadrill SMS had not been implemented.**
 - **Poor location for hatch – subsequently relocated away from major walkway**
 - **Rig was zoned into defined “areas” w- area supervisors appointed for each area. Rig contractor mandated that every JSA and PTW must have input from the relevant area supervisor before sign-off.**
 - **Formal training programmes to be conducted to provide awareness and competence on key SMS procedures.**

Common Findings	Action Taken
Inadequate Supervision.	Area supervisors appointed to a zoned area on the rig.
Deficient knowledge in rig Management System.	All personnel required to attend training on the rig Management System, including PTW, JSA & Contractor requirements.
High churn rate of personnel.	Personnel retention increased through financial incentives.
Ineffective management of 3 rd party contractors.	Management System procedure implemented for management of contractors.
Absence of Safety Culture.	All of the corrective actions taken by SeaDrill, ADA and Nexus started the process of establishing a Safety Culture on the rig.

■ Training Programme

- **SeaDrill, ADA and Nexus collaborated to implement a safety training programme for all rig personnel.**
- **Training emphasized the PTW process, JSA process, supervisor roles and responsibilities.**
- **The training programme was conducted onshore, the day before personnel flew to the rig.**
- **The training programme lasted approximately six weeks.**
- **All personnel (Nexus, SeaDrill, 3rd parties) were required to attend.**
- **The implementation of the training programme was a significant commitment and also helped to build the safety culture**

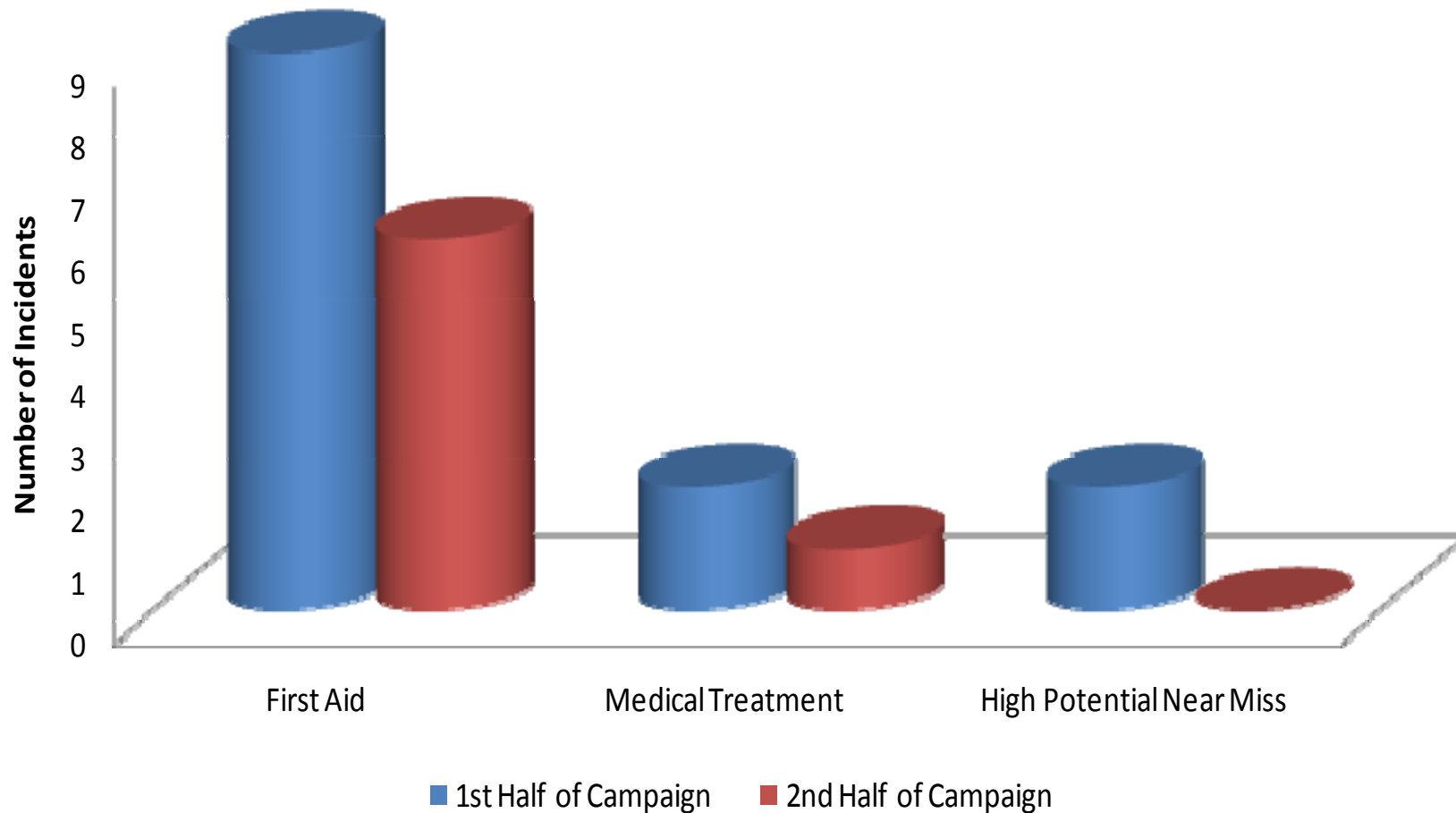
■ Further actions

- **High level meetings between rig contractor and Nexus at Senior Management level in Singapore, Melbourne and on rig.**
 - **Seadrill Snr VP and Nexus Drilling Manager visited rig after first HiPo to solicit rig personnel feedback**
 - **Nexus' Chief Operating Officer and HSEC Manager visited rig after second Hi Po investigation - conducted a safety stand down to address all rig personnel on Nexus' unequivocal commitment to safety.**
- **Improved retention of people through enhanced remuneration / tax treatment.**
- **Additional resources onshore and offshore.**
- **Recognition that with such high turnover, detailed safety inductions had to be redone.**

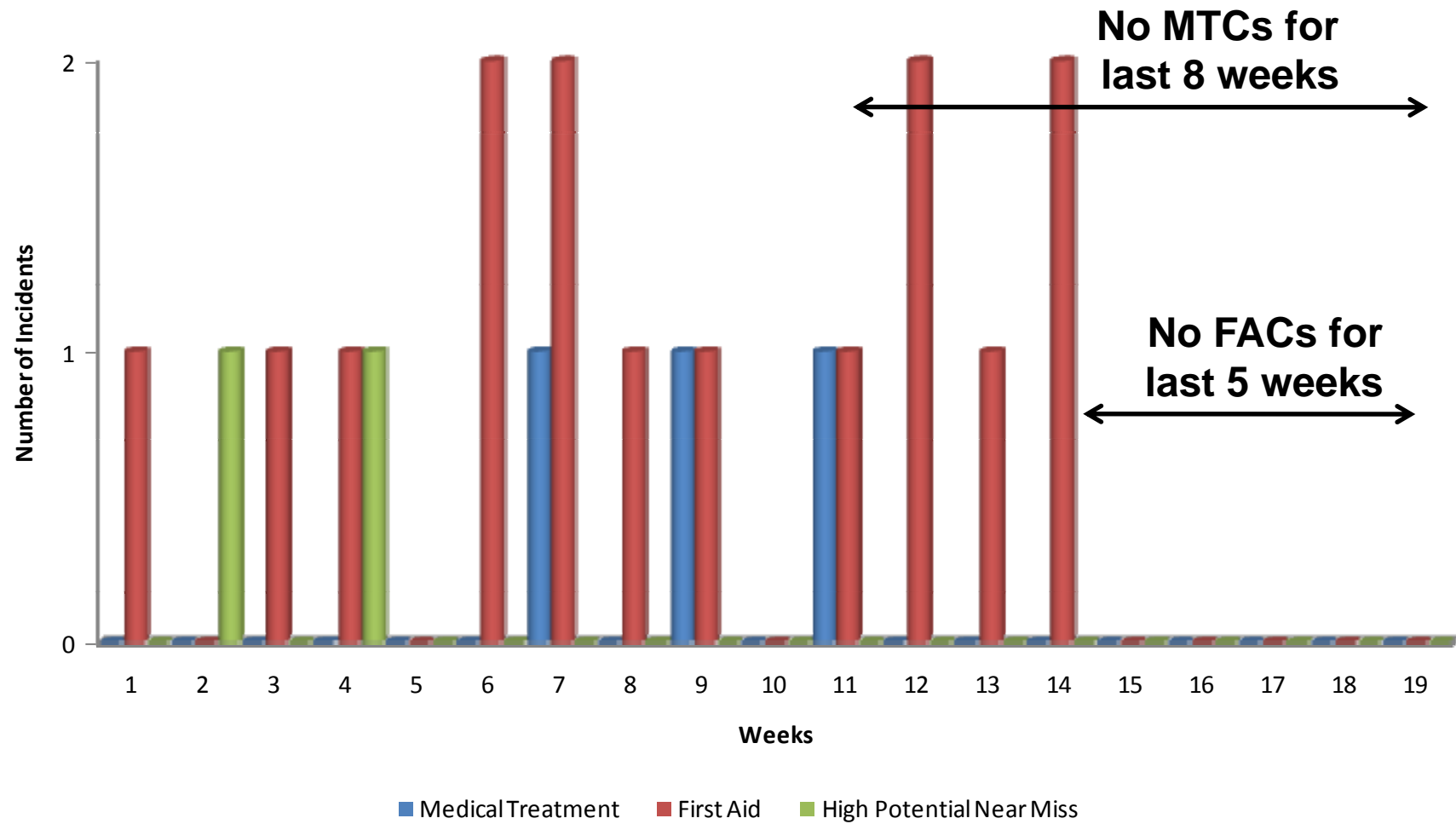
Improved Safety Performance



- Significant improvement on safety performance during the second half of the campaign, after the HiPo and MTCs.



HSEC Performance



Closing Comments...



- The drilling consortium including Nexus were faced with a significant safety challenge.
 - New build rig with new equipment.
 - Rig operator in their third year of operating.
 - New Safety Management System for the rig.
 - Significant number of 3rd party contractors working on rig.
 - High churn rate of front line supervisors.
 - High churn rate of personnel / large number of green hats.
 - No established Safety Culture on rig.
- It is acknowledged that the establishment of a safety culture takes a time. However, this rig has started down this path demonstrated by a significant improvement in Safety Performance during the second half of the campaign.

Everyone Goes
Home Safe
and Sound

