



**CONFIDENTIAL**

# **SCAT Incident Investigation Report**

## **Test Assembly Falls from Rig Floor**

**Rig: 185**

**Incident Date: 30 June 2014**

**Report Number**

**20140629164125**

Published on DIRM Disclosure Log  
RTI Act 2009

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

**PART 1 - INCIDENT DETAILS**

**Incident:**

At approximately 0100 hours on 30 June 2014, Rig 185 was engaged with making up the test assembly to the combination test tool in preparation for function testing the BOP. The 7.5m test assembly, including the combination tool, parted from the PUP joint, and slid down the V Door before coming to rest on the catwalk. A Floorhand and Leasehand were positioned on the ODS of the rig floor, outside the exclusion zone. No personnel were injured.

**Classification:**

- Loss: Equipment Damage
- Potential Loss: Safety, Personnel, Injury
- Incident: Dropped/Fallen Objects

**Date and Time of Incident:** 30 June 2014 - 0100 hours

**Date and Time Investigation Started:** 30 June 2014 – 0115 hours

**Area:** FV 13-20-6 – Fairview South-east Queensland

**Facility:** Rig 185 – Rig Floor

**Investigation Team:**

- Schedule 4 - CTPI (Saxon – Rig Safety Training Coordinator)
- (Saxon - Field Superintendent – Team Leader)
- (Saxon - Night Tour Pusher)
- (Saxon – QHSE Supervisor)

**Immediate Action:**

- The job was immediately stopped and rig was shut down
- Rig Manager immediately notified
- Operations and permits suspended
- Site protected and cordoned off for investigation
- Safety meeting held with all crew
- Rig Superintendent, OP & QHSE Manager notified
- Investigation commenced

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

**Notifications:**

- SES Region Director – Australasia
- SES QHSE Manager - Australasia
- SES Division Manager, QLD
- SES Operations Manager
- SES QHSE Manager – QLD
- SES Rig Superintendent,
- DNRM Inspectorate

**Distribution:**

- SES Region Director – Australasia
- SES QHSE Manager - Australasia
- SES Division Manager - QLD
- SES Operations Manager – QLD
- SES QHSE Manager – QLD
- DNRM Inspectorate

**Conditions:**

Cold, Dry, Clear Visibility, Approximately 1 Degrees C

**Investigation Method:**

A Systematic Causal Analysis Technique (SCAT) was used to investigate the incident to determine the Loss, Type of Event, Immediate Causes, Root Causes and Areas of the Management System requiring Remedial Actions.

**PART 2 – DESCRIPTION OF EVENTS:**

Rig 185 had completed “Nipple Up” operations and was preparing to conduct a BOP function test (in readiness for RIH) at 0100 hours on 30 June 2014. The operation requires the make-up of a test assembly to a combination test tool (test plug). The Driller raised a “soft make up” test assembly to the rig floor as a single section, excluding the test plug.

A Floorhand and Leasehand made up the test assembly into the combination test tool on the ODS of the rig floor outside the painted exclusion zone.

The Driller was observing the screwing in of the pressure test assembly to the combination test plug; being, the connection between the side entry sub and the pup below.

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15



The joint between the 3.4m pup joint and the side entry sub backed out. The Driller did not notice the joint above the side entry sub being backed out.

The Floorhand witnessed the test assembly part from the pup joint above.

The 7.5m (approximately 160kg) test assembly, including the combination tool, slid down the V door, struck the skate and came to rest on the catwalk.

Operations were ceased and all permits suspended. Saxon and Santos management informed immediately.

**Timeline:**

- 1915: Nipple up BOP
- 2345: Pre-Tour Safety Meeting Conducted
- 0050: Pre-Task Safety Meeting Conducted
- 0100: Accident occurred
- 0102: Operations Ceased
- 0102: Night Tour Pusher/Rig Manager/Night OCR informed
- 0110: Rig Floor cordoned off
- 0115: Safety Meeting Conducted
- 0115: Investigation commenced

Published on DNRME Disclosure Log  
RTI Act 2009

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

Photographs/Diagrams:

**Final Resting Position of Test Assembly**



Resting location of assembly on catwalk

**PUP Joint hanging from Elevators**

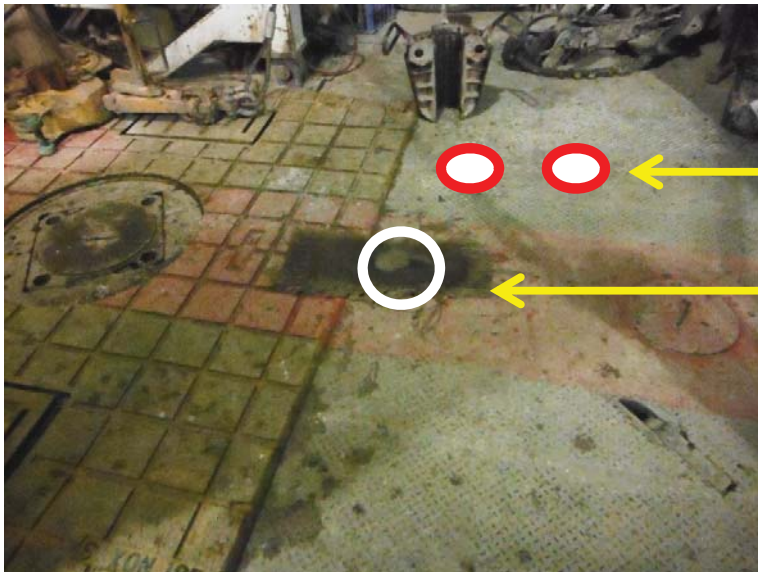


Joint remaining in elevators

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

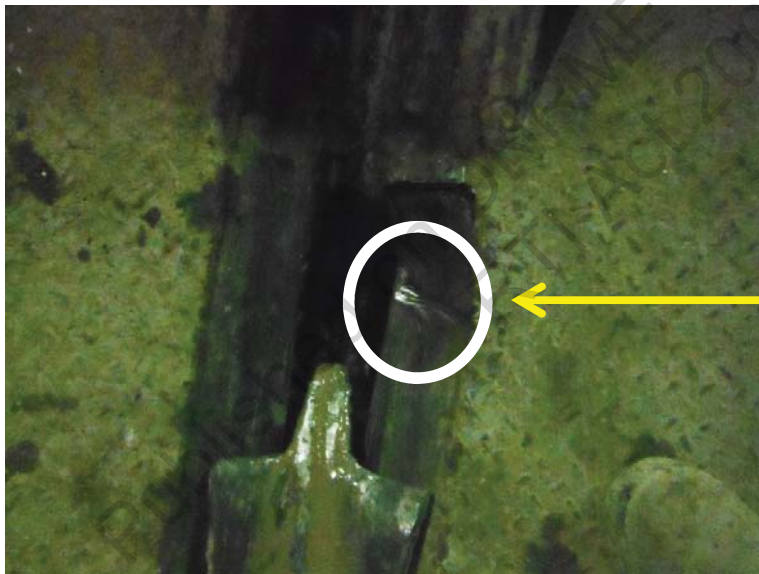
**Rig Floor**



Position of crew on Rig Floor

Location of combination test tool when screwing in

**Catwalk Skate**



Damage to skate

Saxon Energy Services Australia Pty Ltd – Confidential

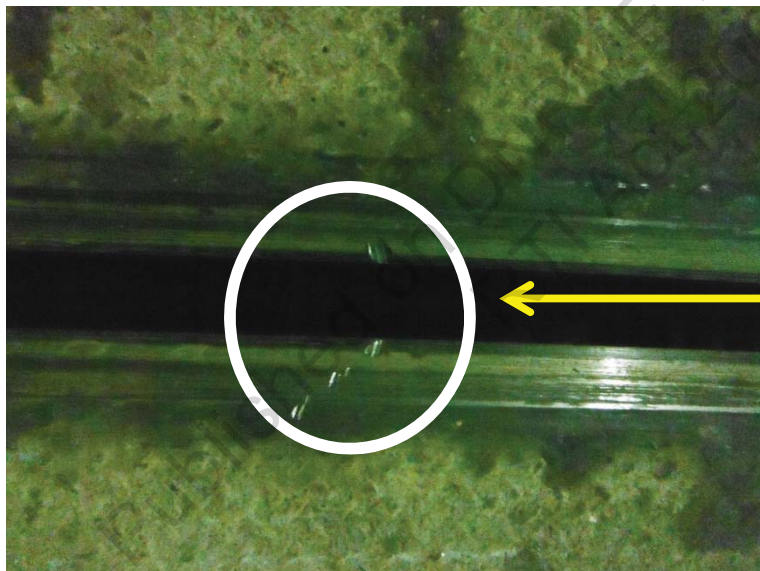
Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

**Catwalk (1)**



Damage to catwalk

**Catwalk (2)**

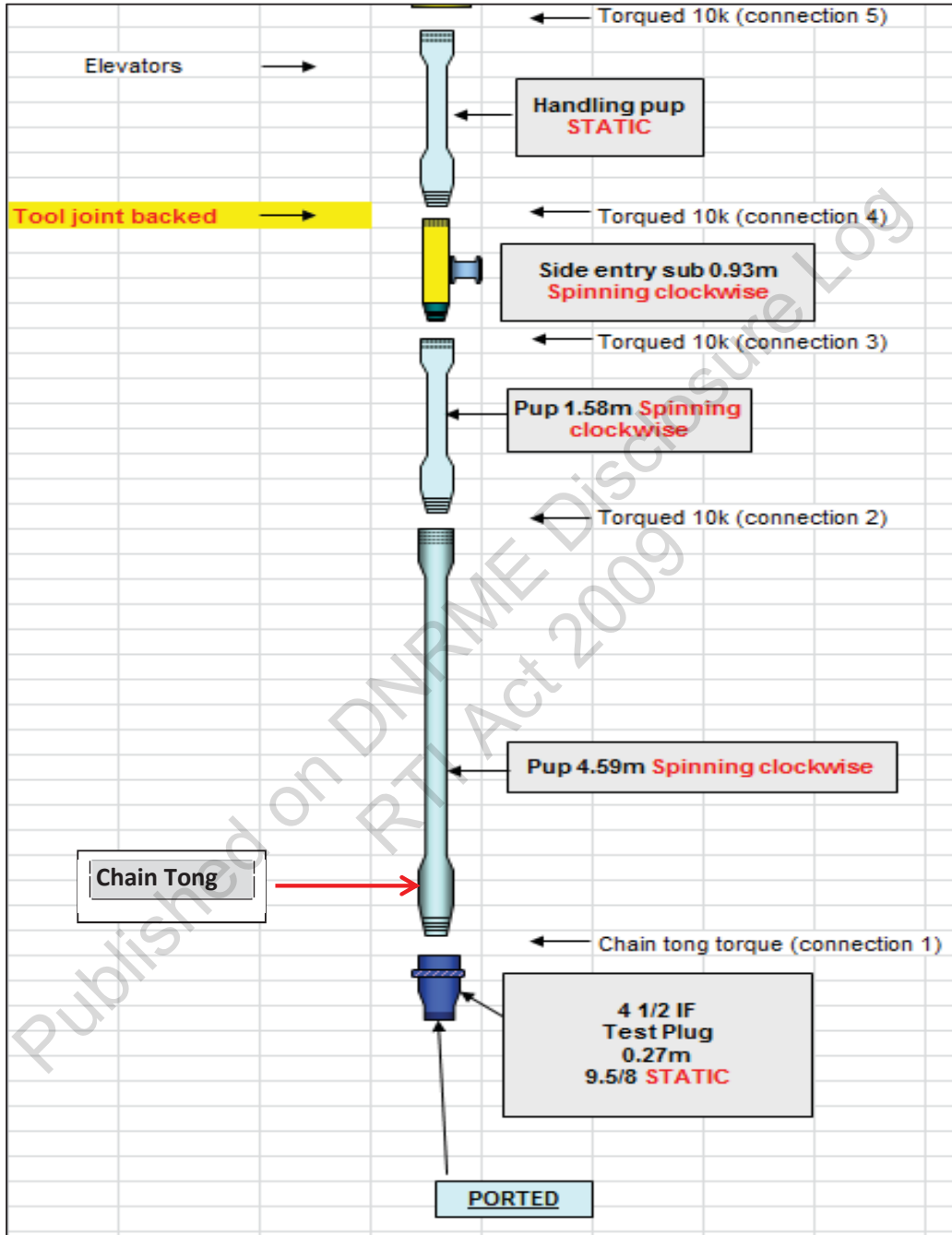


Damage to catwalk

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

**Test Assembly Make up**



Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15



**PART 3 – KEY FINDINGS:**

- The test assembly was raised to the rig floor using the catwalk skate and held by the elevators
- The “V” Door gate was in the open position
- Doghouse windows were clean
- There was no evidence of any similar incident occurring on Saxon ATS 320’s
- The Floorhand and Leasehand were positioned on the ODS outside the exclusion zone
- Catwalk exclusion zones were in place and effective
- No equipment had malfunctioned
- The joints were not “chalked”
- Work Instruction ATS 320-WI-E5 Pressure Test BOP and Choke Manifold was reviewed by the crew at PJSM and permit was opened for the task
- There was sufficient artificial light at the time of the accident
- There were no difficulties raised by crew member during rig up of test assembly.
- Drops calculator for 160 kg test assembly sliding thru v door identify potential catastrophic
- The shift handover between crew members was conducted in alignment with the Saxon SEMP/QHSE Manual.
- Crew did not complete a WPTW for confine space entry as per WI.
- The doghouse cameras were operational
- The Driller commenced with Saxon Qld September 2013; however, has had 3 years previous employment with Saxon SA
- The Driller has had a total of 7 years 8 months industry experience
- The Driller, Floorhand and Leasehand had been on hitch for 10 days
- The Driller, Floorhand and Leasehand had been on tour for approximately 1 hour
- The Driller had a 11 ¾ break between shifts and had slept for 8 hours prior to mounting shift
- Saxon Driller Induction Task List completed by Driller on 6 Apr 2014
- Driller qualified RII41109 - Drilling Oil / Gas (On shore) competent on 9 November 2012
- The Floorhand commenced employment with Saxon Qld June 2013
- The Floorhand has 12 months industry experience
- The Floorhand and Leasehand had an 11 hour break between shifts and slept for more than 8 hours
- Saxon Floorhand Induction Task List completed 1 February 2014
- Floorhand qualified RII21109 - Drilling Oil / Gas (On shore) competent on 6 February 2014
- The Leasehand commenced employment with Saxon Qld June 2013
- The Leasehand has at least 12 months industry experience
- Saxon Floorhand Induction Task List completed on 20 October 2013

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

- Leasehand qualified RII21109 - Drilling Oil / Gas (On shore) competent on 6 May 2014
- Driller, Floorhand and Leasehand all have completed HSE 1 which encompasses hazard awareness

**PART 4 – INCIDENT INVESTIGATION SCAT ANALYSIS**

**Loss: Quality Non-Productive Time**

**Incident: Fall From Elevation to lower level (Test Assembly)**

Test Assembly slid down from rig floor through the V door

**Immediate Cause** (Substandard Act) - Improper Make up/Assembly

*When screwing in from the top down in to the test plug, the connection between the pup joint and side entry sub unscrewed and parted*

**Root Cause** (Personal Factor) – Improper Motivation

*Driller was aware of best practice however attempted to save effort by screwing tubular in to the test plug instead of screwing test plug in to tubular*

*The crew member did not execute all the steps within Work Instruction including WPTW requirement for confine space entry*

**Sub Root Cause** (Personal Factor) – Improper attempt to save time or effort

*By screwing in to test plug on the rig floor it eliminates manual handling of the test plug however it causes the tool joints above to reverse torque*

*Supervisor failed to ensure crew member follow all requirements within Work Instruction including WPTW.*

*Remedial Action: See RWP No 1*

**Immediate Cause** (Substandard Condition) – Inadequate Documented Instructions

*Work Instruction has insufficient details on the potential for the assembly to back out as a hazard*

**Root Cause** (Personnel Factor) – Inadequate Performance feedback

*Crew failed to provide feedback of inaccurate make up process for test assay within WI.*

**Lack of Management System Control:** Performance Monitoring and Improvement

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

Compliance monitoring: There was no task assessment performed for making up test assembly

Remedial Action: See RWP No 2 & No 3

**Immediate Cause** (Substandard Act) – Failure to React/Correct

*When the connection began to unscrew the Driller failed to recognize hazard and respond*

**Root Cause** (Personal Factor) – Lack of situational awareness

*Driller failed to notice the upper connection unscrew because he was focused on the lowest connection where the crew members were making up the test plug. In addition, there was no physical mark (chalk) to help identify connection backing out.*

Remedial Action: See RWP No 2

RWP No:	Task Detail	Responsible	Due date
1	Apply Accountability Matrix to Driller	Rig 185 Rig Manager	6 July 2014
2	Amend Work Instruction	Rig 185 Rig Manager	6 July 2014
3	Senior QHSE coach to assess Work Instruction compliance and to address any identified knowledge gaps	Senior QHSE Coach	11 July 2014

#### **PART 5– HUMAN FACTORS ANALYSIS TOOLS (HFAT)**

Owing to the identification of non-conformance as a factor within Root Causes, HFAT was applied to the actions of the Driller involved in this incident. This was conducted by an Investigator trained in the application of HFAT.

#### **Behavior Extraction**

The behaviour extraction exercise concluded that the Drillers actions in attempting to save time & effort by screwing the tubular into the test plug instead of screwing the test pug into the tubular was an intentional violation. This is based upon the following HFAT findings:

- The Driller admitted at interview that he was aware of the correct procedure.

The behaviour extraction exercise concluded that Drillers actions in failing identify the potential hazard of the tubular backing out was unintentional and therefore human error. This is based upon the following HFAT findings:

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15

- The associated WI for the procedure did not explicitly address the potential hazard

As a result of the above, ABC Analysis was conducted with regard to the Intentional Violation & Human Error Analysis to the Unintentional Violation

As a result, the following recommendations are made additional to those already expressed within the RWP above:

RWP No:	Task Detail	Responsible	Due date
4	Re-train Rig 185 crew members in Saxon's basic job planning steps	Senior QHSE Coach	07 Jul 14
5	Consider the minimum Supervision Requirement for this procedure & judge its effectiveness – amend as appropriate	Operations Manager	07 Jul 14
6	Senior QHSE Coach to conduct an ongoing program to assess broader compliance with WIs on Saxon Rigs 185, 186 & 187 to address any identified knowledge gaps and advise of any technical content concerns.	Senior QHSE Coach	07 Jul 14
7	Implement an ongoing program of Observation Tasks Assessments to be conducted by QHSE staff on all SES Rig in Australia to monitor compliance with Work Instructions. Conduct interventions as appropriate. Report findings using STRIVE through the QUEST Database	State QHSE Managers	Commence by 07 Jul 14. Review 06 Aug 14

**PART 6 OTHER ACTIONS/RECOMMENDATIONS:**

- Distribute a full HSE Alert to all relevant Saxon Rigs 186, 187 & 188 – include crew sign-off

Saxon Energy Services Australia Pty Ltd – Confidential

Title	Responsible Dept	Document Number	Status	Rev Date	Next Review
SESA SCAT Template	QHSE	QHSE.AUS.FRM.009	Active	23/06/14	22/06/15