

RIG MOVE PLAN

OPERATION HANDBOOK



1

Procedure Name: Rig Move Plan

Date: 18/08/09

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Santos

Rig Moving in Santos CSG

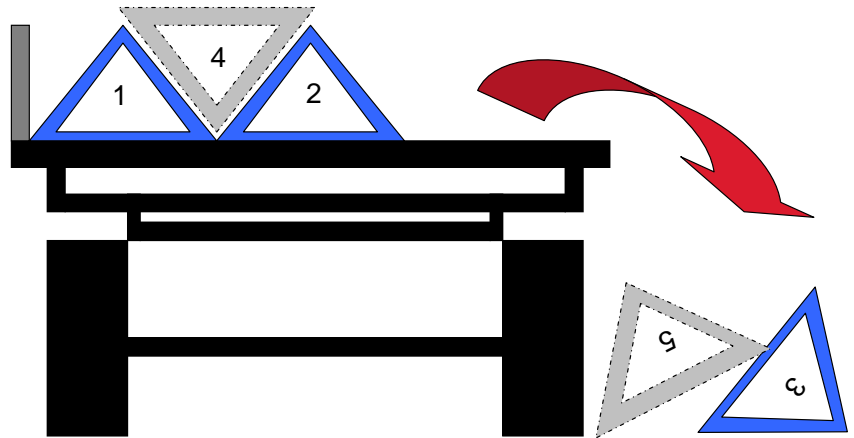
How things changed after 14 August 09

03 December 09

Incident Summary

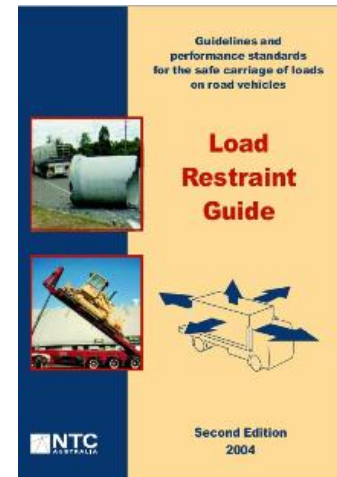
Findings: Load configuration resulted in stored energy, and inadequate restraint during the unloading process resulting in a fatal injury

- No secondary load restraint in place
- The chains were all released at the same time
- Weight of top racks forced 2 racks off trailer
- The driller was standing in the danger zone, was hit and pinned to the ground
- He died in an ambulance en-route to Hospital



Learnings from Fatality

- Institutionalise load design and restraint guidelines, underpinned by appropriate risk assessment and training
- Recognise the critical importance of safety leadership and the use of safety tools by all personnel
 - Safety intervention
 - Job Hazard Analysis
 - Safety hold points in procedures



Introduction to new Rig Move Plan

- Key Roles and Responsibilities
- Key Competencies and Training
- Key Process Steps
- Steering Committee
- Learnings from fatality linked back to Rig Move Plan

Key Roles and Responsibilities

- **Load Master**
 - Minimum 5 years in the transport industry/Minimum 3 years experience in Heavy Haulage
 - Assess hazards between leases before rig moving including the lease itself
 - Inspect loads and identify hazards or potential hazards associated with the load apply strategies to mitigate / eliminate risk
 - Train personnel in the application of rig move procedures
 - Chair the Pre-Job Safety Meeting
- **Site Manager**
 - Provides assistance to the Load Master through manpower and resources
- **HSE Advisor**
 - Provides HSE expertise throughout the risk management process
 - Provides formal training and assessment against the induction requirements
- **Driver**
 - Undertakes Logistics Induction Package
 - Complies with the requirements of the Induction Package



Key Competencies & Training

- Competency requirements (EWG example)
 - Logistics Induction - training in the RM plan
 - Load Restraint Awareness Certificate
 - Chain of Responsibility Certificate
 - Fatigue Management Training
- Training Methodology
 - Training provided to all key personnel prior to undertaking operations
 - Training is provided both in house and by third parties
 - Training is recorded on the site training matrix
 - Assessment is completed through a combination of:
 - Written assessment
 - Oral Questions
 - Observations



Dangerous Goods Equipment and Training.
(A Division of Dangerous Goods Equipment Pty Ltd)

DGET003 Load Restraint Awareness Certificate of Attendance Course.



Dangerous Goods Equipment and Training.
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DGET004 Chain of Responsibility Awareness Certificate of Completion Course.

Key Process Steps


1. Rig move request form

2. Pre move risk assessment

- Conducted at least 24 hours prior to move
- Conducted by Load Master
- Covers

3. Pre job meeting – follows the format of the risk assessment

- Reviewed and signed by everyone involved in the rig move
- Chaired by load master



The image shows a 'RIG MOBILIZATION REQUEST FORM' from Easternwell Logistics, titled 'Rig # 103'. The form includes a table with columns for 'Quantity', 'Equipment required (make/model/year/condition/stock #)', 'Date Requested to SWR', 'Time Requested to SWR', 'Date Requested on Site', and 'Comments (to provide and details to SWR)'. The table lists various equipment such as 'RIG TRUCK', 'RIG TRUCK WITH ROLL TRAILER', 'RIG MOVER WITH DOUBLE TRAILER', 'RIG MOVER WITH SINGLE TRAILER', 'RIG MOVER WITH FLIGHT', 'RIG MOVER WITH SCAMP TRAILER', 'DOLLY', 'HELPER/DOLLY', 'LIFTER', and 'RIG ELECTRICIAN'. Below the table, there are fields for 'Available Accommodation (number of beds)', 'Needs to be provided', and 'Numbers will be confirmed by EWG Logistics Yard Manager pre-mobilization'. A red note at the bottom states: 'This equipment delivery will be subject to the Rig Manager via the Ultimate EWG Monthly and Stone Trade. Shipping Containers: This form only applies to mobile rigs. It does not apply to mobile containers. SWR: A truck may only be mobilized if it is approved by the Production SWR on the day of mobilization. If you have any questions, please contact the Production SWR on the day of mobilization. This form must be used in conjunction with the rig mobilization request form to ensure all necessary details are captured.

Rig Move Process Steps

4. Load trucks in accordance with Rig Load List and Loading guide
5. Complete part A and B of Rig Equipment Transportation form
 - Rig Manager and Transport Driver complete first and second sections
 - Form is reviewed and endorsed by Load Master
6. Flag loads
 - Transport Driver installs a green tag only after the Load Master has approved the load
7. Complete Part C of Rig Equipment Transportation form
 - Completed by driver to prompt for unloading hazards and to capture learnings
 - Form returned to Load Master after job

Pre-move Risk Assessment

Signed Copy

ROAD SURVEY / HAZARD ANALYSIS



Person responsible for completing this form is: Darryl Thomas
 Radio channel for the rig move is: UHF 40
 Rig Move Distance: 2.5 km
 Proposed Move Date: 08.11.09 Start Time: 07.00

Risk Assessment No:

Rig 102 | Date 6/7-11-09 | From Fairview # 280 | To: Fairview # 274

Description of Hazard but not limited to:

Dust	1	Rough Road Surface	Lease condition	12
Loose sandy surface	2	Grids and gates	Inspect load restraint equipment	13
Uneven ground	3	Road works	Load restraint	14
wash outs		Traffic	8	Distance between leases
Soft ground	4	Pedestrians	Livestock	
Slippery Ground	5	School Bus routes	Direction of sun	
Buildup Holes		Overhead powerlines	Green hands	
Sharp Bends	6	Over head obstacles	9	Weather Conditions
Steep inclines /Declines		Limited Lease access	10	Speed limits
Gully/Creek crossings	7	Lease size	11	Narrow roads

List additional hazards/Risks:

List additional hazards/Risks:	Likelihood (A,L,P,U,R)	Consequences (M,Mi,Mo,Ma,C)	Risk Score
List of controls to reduce the risk to as low as reasonably possible (ALARP):			
1) Do not drive in dust clouds	R	Mo	1.6
2) R/H turn to FV 274 after creek crossing, take corner wide.	U	Mi	1.5
3) Cross chain loads on bed truck before traversing uneven ground	R	Ma	1.8
4) Avoid where possible do not load or unload in these areas.	R	Mo	1.6
5) Avoid where possible, Stop if unsafe, advise load master/ field coordinator/RM	R	Mo	1.6
6) Uhf comms empty trucks give way to loaded trucks.	R	Mi	1.3
7) Gullies / creek crossings, one truck at a time, UHF comms.	R	Mi	1.3
8) Traffic, be cautious to other road users, empty trucks give way, UHF comms	R	Mi	1.3
9) Some tree branches protruding over route be aware, gear fully rigged down.	U	Mi	1.5
10) Do not enter leases until called in. Do not block entrances and exits.	R	N	1.1
11) Both leases small, do not enter unless called in. Load schedule.	R	N	1.1
12) Steep entrance to new lease, wet slippery surface on old lease at time of inspection. Will be re-inspected prior to move start.	U	Mi	1.5
13) Inspect load restraint gear prior to use. No worn or faulty gear to be used.	R	Ma	1.8
14) Load restraint as per restraint guide.	U	Mi	1.5
15) Wet weather will stop this move,	P	N	1.4
16) Drive to conditions, 50 km/hr speed limit.	U	Mi	1.5
17) Some narrow roads, oversize loads will not be able to pass empty trucks in some areas. Call on UHF prior to entry to lease turn offs. (as per maps) All vehicles to be completely clear of these access roads whilst rig carrier is in transit. UHF comms.	P	N	1.4

Were all hazards identified on Risk Assessment discussed at TBM?

x

Risk Matrix

		Consequence				
		Negligible	Minor	Moderate	Major	Critical
Likelihood	Almost Certain	2.1	3.3	4.1	5.1	5.3
	Likely	1.7	3.1	3.4	4.2	5.2
	Possible	1.4	2.2	3.2	3.5	4.3
	Unlikely	1.2	1.5	2.3	2.4	3.6
	Remote	1.1	1.3	1.6	1.8	2.5

Low Medium High

Name and signature of all personnel present at the tool box meeting:

Name	Signature	Name	Signature
Rob Taylor	[Signature]	Jason Sharp	[Signature]
Mark Cop	[Signature]	Guy Irvine	[Signature]
Al Baldo	[Signature]	J. Miller	[Signature]
Walter Bennett	[Signature]	Nick Miller	[Signature]
Travis R. Anderson	[Signature]	Chris [unclear]	[Signature]
Ernest [unclear]	[Signature]	Phil [unclear]	[Signature]
Kyle [unclear]	[Signature]		
[unclear]	[Signature]		
Bill [unclear]	[Signature]		
Ray [unclear]	[Signature]		
Edwin [unclear]	[Signature]		

Extra Information from tool box meeting:

- PPE
- HAND INJURIES/PINCH POINTS
- WORKING AROUND WINCHES
- SWAMPING /SPOTTERS
- RISK ASSESSMENT
- RIG MOVE PLAN.
- WHIP AREA FOR WINCH TRUCK
- LAND OWNER REQUIREMENTS.

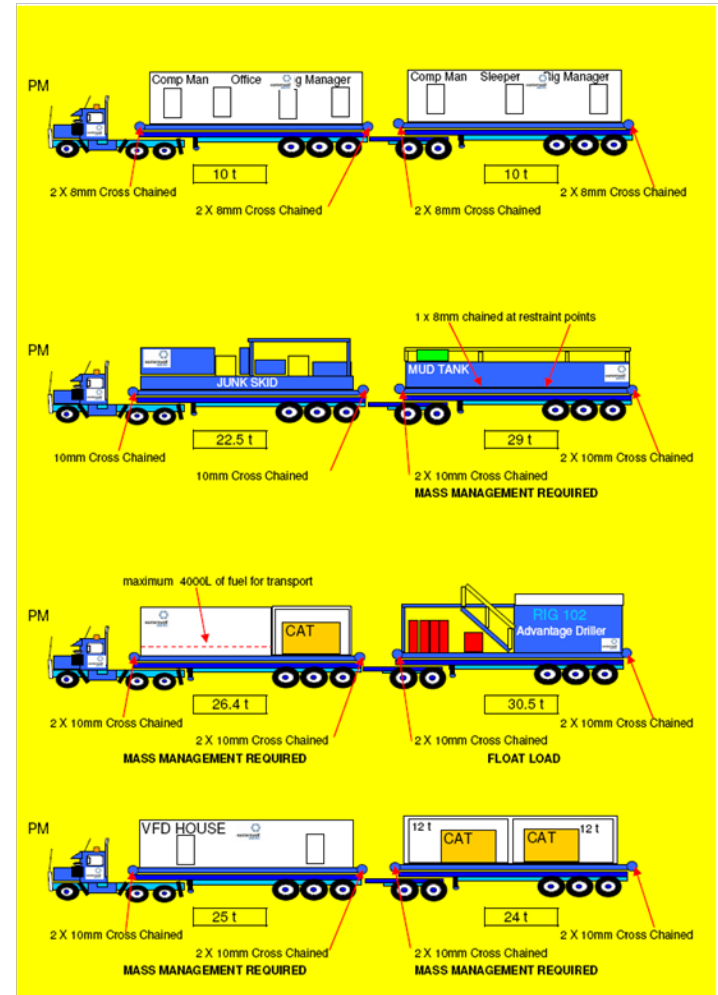
List JHAs and SOPs reviewed

Copy of this form and map is to be handed to driver



Load Lists

- All standard loads identified in the plan
- Tie down points and restraint methods (including chain sizes) are identified
- Load weights are identified



Transportation Form

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Rig Equipment Transportation

This form is to be completed by the site managers and truck drivers.

Part A - Rig/Site Manager to complete

Inspection Checklist	Initial	Comments
Site Manager/Load Master to travel and assess the proposed route to the new lease. All road hazards must be documented on attached Road Survey Hazard Analysis and discussed at the pre transportation meeting with all personnel involved in transporting the equipment including agreed safest route, destination and distribution of maps to all drivers indicating recognized road hazards. (Pre-Job TBM)		
Site Manager/crew have complied with rig down JHA/SOPs including procedures that involve the appropriate plugging of SPU inlet hose connections, septic tanks are emptied to minimum transportable level prior to moving and the movement of water tanks,		
Site Manager/crew have restrained all equipment retained within the junk skids ready for GREEN tag inspection by the Load Master (JUNK SKIDS ARE NOT TO BE LIFTED WITHOUT THE APPROVAL OF THE LOAD MASTER AND A GREEN TAG ATTACHED).		
Site Manager to ensure that MSDS's are provided for all chemicals to be transported		

RIG #

Departing Lease New Lease

Rig/Site Manager Signature

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Part B - Transport Driver to complete before departing lease

Drivers are responsible for checking their loads before departing the Lease.

The **GREEN TAG** shall be attached to the trailers coming rail on the front driver's side.

The **GREEN TAG**, after the approval of the Load Master, shall be placed on this trailer by the Driver and shall remain until arriving on the next lease.

N.B. Only drivers that have completed the "Load Restraint Awareness Course" DGET003 or equivalent, or the rig move Load Master are authorized to complete this form.

Departure Checklist	Initial	Comment- Load 1	Initial	Comment- Load 2
I am well rested and have appropriate legal working hours available as indicated in my Log Book/National Driver Diary				
I have attended a Premobilisation Tool Box Meeting with Site Manager/crew				
I have reviewed the Road survey/Hazard Analysis for the journey and placed a copy in the truck's cab for reference I am aware of type and location of hazards that are present				
I have pull Tested my load as per SOP 9 - Rev 1 Attaching Trailers/Dollies THIS MUST BE COMPLETED WITH THE LOAD MASTER PRESENT				
Brief load description (example 2 sleeper shacks/mud tank/ 2 flat beds)				
My load is defined as routine in the rig move plan load Schedule (IF NOT A TRAINED PERSON MUST CONDUCT A RISK ASSESSMENT FOR THIS LOAD AND REVIEWED BEFORE RESTRAINING) and attach to this form for future reference				
I have checked load for any articles that may dislodge during the journey and restrained as per NTC Load Restrain Guide				
BOLSTERS, TAIL CHAINS AND SAFETY CHAINS ARE IN PLACE WITH ALL LOADS CARRYING PIPE, PIPE RACKS OR ITEMS LONGER THAN BOLSTER POSITIONS				

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Part B - Transport Driver to complete before departing lease (cont)

I am satisfied with the way the trailer load was positioned? (Advise rig crew on how you would like the trailer loaded if not satisfied and rectify before proceeding)				
I AM AWARE OF MY RESPONSIBILITIES AS THE DRIVER BEFORE UNLOADING AT THE NEW LEASE				
RADIO CHECK TO ADVISE THE LOAD MASTER YOU ARE DEPARTING THE LEASE AND SWITCHING COMMUNICATIONS TO CHANNEL 40				
Driver - Name	Driver - Signature			

Time - ampm.....

Departing Lease New Lease

Prime Mover Registration Trailer's Registration

Drivers Name and CompanyRig No

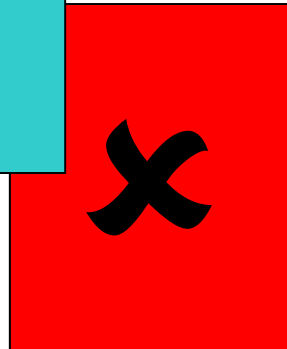
Drivers Signature Date

- TD – confirms load is in plan – if not RA must be conducted
- TD – bolsters for anything longer than bolster positions, tail chains as required
- Confirms unloading responsibilities
- Radio Check

- Confirms that the Risk assessment has been reviewed
- Confirms that JHA/SOPs have been reviewed if required
- MSDS for all chemicals supplied
- TD – log books, Tool Box meeting, Risk assessment
- Pull Test with LM present

The flag system

- Issued and affixed by the driver upon completion of the Transportation Sheet with approval of Load Master
- Attached to coaming rail on front drivers side – visible on road
- Removed only by driver after unloading trailer at new lease



Rig Move Steering Committee



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RIG MOVE STEERING COMMITTEE

Date: Thursday 12th November 2009
Time: 9.00am
Location: The Starlight Motor Inn, 20b Bowen Street Roma
Meeting: 2/2009

AGENDA

1.1 Welcome, Expected Attendees & Apologies		
Expected Attendees:		
Scott Couacaud, EWG (Chair)		
Luke Smith, EWG		
Mike Phillips, EWG		
Craig Hunter, EWG		
David Lee, EWG		
Kyle Koziol, EWG		
Ross Penrose, Roma Transport		
Martin Young, Neil Mansell Transport		
Rex Grainger, Santos Representative		
Apologies:		
Doug Watson, EWG		
John Melrose, EWG		
1.2 Confirmation of the Minutes – 13 th October 2009		
AGENDA ITEM	DETAILS	SPEAKER
2 BUSINESS ARISING		
2.1 DWL-06-DOC5 Equipment Transportation List	Feedback and discussion on the equipment transportation list.	Scott
2.2 EWL-47-DOC4 Logistics Hazard Risk Assessment	Review of list as compiled by EWG, Mansell and Roma Transport on vehicle technical limitations together with form showing EWG expectations regarding measurements etc.	Scott
2.3 Swampers and Spotters	Outcomes and update from discussions on commercial proposal regarding the swamper.	Scott
2.4 CB & UHF Radios	Update on CB & UHF radios.	Scott
2.5 Rig Move Information	Distribution of the Rig Move Plan Revision 2.	Scott
2.6 Role Description and Competency	Confirmation Load Masters are completing a certificate 3 in OHS training.	Scott
2.7 Effectiveness of training strategy and rig move plan	Discussions and feedback on the effectiveness of training strategy and rig move plan.	Scott
2.8 Standards, Procedures and Training Resources	Revision and status of standards, procedures and training resources.	Scott
2.9 Group Feedback	Discussion on feedback and review.	Scott
3 NEW BUSINESS		
3.1 New Business to be stated at meeting		

- Run monthly
- Active Industry Participation
- Designed to keep standards high and process live

Summary

How have incident learnings have been integrated into plan?

- Institutionalise load design and restraint guidelines
 - *Competency training in load restraint now mandatory for all those involved in the move*
- Appropriate risk assessment and training
 - *Risk assessment now integral to the rig move process*
 - *Chain of responsibility training mandatory for all those involved in the move*
 - *Cert III training course for Load Masters to include Hazard Management training*
- Critical importance of safety leadership
 - *Load Master has key Safety Leadership role – sets the safety standard for the move*
- Use of safety tools by all personnel
 - *Risk assessment, SOPs, JHAs and Tool Box meetings all integral to every rig move activity*