



**Australian Government**

**Department of Education,  
Science and Training**

# **DRT03 Drilling Training Package**

**Volume 3 of 3**

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**ISC** INDUSTRY  
SKILLS  
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Creating Australia's Future

# **DRT03 Drilling Training Package**

This volume contains part of the endorsed component of the Drilling Training Package. It is one of three volumes and should not be used in isolation of those other volumes.

## **Volume 3 of 3 Oil and gas sector competency standards and Advanced Diploma competency standards**

### **Volume 1**

- Overview of Training Packages
- Introduction
- Competency Standards
- Qualifications Framework
- Packaging Rules for DRT03 qualifications
- Assessment Guidelines

### **Volume 2**

- Non-hydrocarbon sector competency standards
- Advanced Diploma competency standards

### **Volume 3**

- Oil and gas sector competency standards
- Advanced Diploma competency standards

## DRT03 - Drilling Training Package

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## Version Modification History

The version details of this endorsed Training Package are in the table below. The latest information is at the top of the table.

Version	Release Date	Comments
2	TBA	<ul style="list-style-type: none"> <li>Inclusion of Employability Skills in all DRT units of competency</li> <li>Inclusion of mandatory texts</li> <li>Deletion of Key Competencies in all DRT units of competency</li> <li>Correction of typing errors</li> <li>Inclusion of coal seam methane units ie: <ul style="list-style-type: none"> <li>DRTOG55A Support blow out prevention operations</li> <li>DRTOG56A Assist with coal seam gas control</li> <li>DRTOG57A Apply effective coal seam gas control practices</li> <li>DRTOG58A Apply blow out prevention operational procedures</li> </ul> </li> <li>Revised and recoded the following to cover coal seam gas: <ul style="list-style-type: none"> <li>DRTNHB49A Plan drilling to DRTNHB49B Plan drilling (Vol II/page 801); Range Statement amended to cover coal seam methane drilling.</li> <li>DRTOG30B Carry out well control and blow out prevention to DRTOG30C Carry out well control and blow out prevention (Vol III/page 1141); Unit restructured to cover coal seam gas control practices.</li> </ul> </li> <li>Corrected unit code from MNMOCC418A Transport plant and equipment to MNMOCC1418A Transport plant and equipment (Vol II/page 239).</li> <li>MNMUGC102A Conduct ground support operations: There were no unit found in the original Training Package DRT03 V1.01; inserted unit in Vol II (page 257) Non-hydrocarbon units of competency</li> <li>Deleted unit MNMMNI303A Handle and transport explosives and replaced it with unit MNMUGC441A Handle and transport explosives (Vol II/page 483).</li> <li>MNMMNI401A Administer shotfiring activities (Vol II/page 467) - this unit is contained and listed in the Summary of Units of Competency but not listed in any qualifications. Inserted unit in the following Mineral Exploration qualifications: <ul style="list-style-type: none"> <li>DRT30503 Cert III in Drilling - Mineral Exploration</li> <li>DRT40503 Cert IV in Drilling - Mineral Exploration</li> </ul> </li> <li>BSZ units replaced with TAA units (Standard 7.3 in Assessment Guidelines) (Vol 1/page 173)</li> </ul>

Version	Release Date	Comments
		<ul style="list-style-type: none"> <li>Updated references to MNC98, MNQ98 and MNM99 to reflect current Training Packages ie MNC04, MNQ03 &amp; MNM05 in a number of qualifications</li> <li>Deletion of Rationale boxes in all qualifications</li> </ul> <p>Changes to qualifications</p> <ul style="list-style-type: none"> <li>DRT20503 Certificate II in Drilling - Mineral Exploration (Vol 1/page 101) (no change in code and title):</li> </ul> <p><b>2 new units added:</b></p> <ol style="list-style-type: none"> <li>DRTOG55A Support blow out prevention operations</li> <li>DRTOG56A Assist with gas seam control <ul style="list-style-type: none"> <li>DRT30503 Certificate III in Drilling - Mineral Exploration (Vol 1/page 103) (no change in code &amp; title):</li> </ul> </li> </ol> <p><b>2 pairs of Method units added:</b></p> <ol style="list-style-type: none"> <li>DRTNHB13A Assist guided boring</li> <li>DRTNHB32A Conduct guided boring</li> <li>DRTNHB14A Assist directional drilling</li> <li>DRTNHB33A Conduct directional drilling</li> </ol> <p><b>2 new units added:</b></p> <ol style="list-style-type: none"> <li>DRTOG55A Support blow out prevention operations</li> <li>DRTOG56A Assist with gas seam control <ul style="list-style-type: none"> <li>DRT40503 Certificate IV in Drilling - Mineral Exploration (Vol/page 105) (no change in code &amp; title):</li> </ul> </li> </ol> <p><b>2 pairs of Method units added:</b></p> <ol style="list-style-type: none"> <li>DRTNHB13A Assist guided boring</li> <li>DRTNHB32A Conduct guided boring</li> <li>DRTNHB14A Assist directional drilling</li> <li>DRTNHB33A Conduct directional drilling</li> </ol> <p><b>1 existing new version unit added:</b></p> <p>DRTOG30C Carry well control and blow out prevention</p> <p><b>2 new units added:</b></p> <ol style="list-style-type: none"> <li>DRTOG57A Apply effective coal seam gas control</li> <li>DRTOG58A Apply blow out prevention operational procedures</li> </ol> <p><b>1 existing unit added:</b></p> <p>DRTOGOF21B Operate drilling fluids and mud pits</p> <ul style="list-style-type: none"> <li>DRT50503 Diploma of Drilling - Mineral Exploration (Vol</li> </ul>



Version	Release Date	Comments
		<p>1/page 107) (no change in code &amp; title)</p> <p><b>1 existing new version unit amended:</b> DRTNHB49B Plan Drilling This unit was also amended in the following qualifications: 50103 50603 50203 50703 50303 51003 50403 51103</p> <p><b>2 pairs of Method units added:</b> 1. DRTNHB13A Assist guided boring 2. DRTNHB32A Conduct guided boring 1. DRTNHB14A Assist directional drilling 2. DRTNHB33A Conduct directional drilling</p> <p><b>1 existing new version unit added:</b> DRTOG30C Carry well control and blow out prevention</p> <p><b>2 new units added:</b> 1. DRTOG57A Apply effective coal seam gas control 2. DRTOG58A Apply blow out prevention operational procedures</p> <p><b>2 existing units added:</b> DRTOGOF21B Operate drilling fluids and mud pits DRTOGON24B Operate mud systems</p>
1.01	23/12/04	Correction of errors in Qualifications Framework
1	09/12/03	Primary Release - Reviewed version of DRT98
2.00	22/01/02	Inclusion of units of competency for Certificate IV & Diploma within the Oil & Gas sector
1.00	09/12/98	Primary release of DRT98

**Forms control:** All endorsed Training Packages will have a version number displayed on the imprint page of every volume constituting that Training Package. Every Training Package will display an up-to-date copy of this modification history form, to be placed immediately after the contents page of the first volume of the Training Package. Comments on changes will only show sufficient detail to enable a user to identify the nature and location of the change. Changes to Training Packages will generally be batched at quarterly intervals. This modification history form will be included within any displayed sample of that Training

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Package and will constitute all detail available to identify changes.

# Qualifications Framework

## The Australian Qualifications Framework

### What is the Australian Qualifications Framework?

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF see the *AQF Implementation Handbook, 3rd Edition 2002*. You can download it from the Australian Qualifications Advisory Board (AQFAB) website ([www.aqf.edu.au](http://www.aqf.edu.au)) or obtain a hard copy by contacting AQFAB on phone 03 9639 1606 or by emailing AQFAB on [aqfab@curriculum.edu.au](mailto:aqfab@curriculum.edu.au)

The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the vocational education and training (VET) sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

### Qualifications

Training Packages can incorporate the following eight AQF qualifications.

- Certificate I in ...
- Certificate II in ...
- Certificate III in ...
- Certificate IV in ...
- Diploma of ...
- Advanced Diploma of ...
- Vocational Graduate Certificate of ...
- Vocational Graduate Diploma of ...

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the *AQF Implementation Handbook* and the Australian Quality Training Framework *Standards for Registered Training Organisations*, particularly Standard 10.

### Statement of Attainment

Where an AQF qualification is partially achieved through the achievement of one or more endorsed units of competency, an RTO may issue a Statement of Attainment. Issuance of Statements of Attainment must comply with the advice provided in the *AQF Implementation Handbook* and the Australian Quality Training Framework *Standards for Registered Training Organisations*, particularly Standard 10.

Under the *Standards for Registered Training Organisations*, RTOs must recognise the achievement of competencies as recorded on a qualification or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

### AQF Guidelines and Learning Outcomes

The *AQF Implementation Handbook* provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

## Certificate I

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.

Applications may include a variety of employment related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.

### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction
- receive and pass on messages/information.

## Certificate II

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for own outputs in work and learning.

## Certificate III

### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures

and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

#### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge
- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others.

## **Certificate IV**

#### *Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

#### *Distinguishing Features of Learning Outcomes*

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

## **Diploma**

#### *Characteristics of Learning Outcomes*

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal

responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

#### *Distinguishing Features of Learning Outcomes*

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes.

## **Advanced Diploma**

#### *Characteristics of Learning Outcomes*

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

#### *Distinguishing Features of Learning Outcomes*

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters.

## **Vocational Graduate Certificate**

#### *Characteristics of competencies or learning outcomes*

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.

- Substantial breadth and complexity involving the initiation, analysis, design, planning, execution and evaluation of technical and management functions in highly varied and highly specialised contexts.
- Applications involve making significant, high-level, independent judgements in major broad or planning, design, operational, technical and management functions in highly varied and specialised contexts. They may include responsibility and broad ranging accountability for the structure, management and output of the work or functions of others.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

*Distinguishing features of learning outcomes*

- Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.
- Generate and evaluate ideas through the analysis of information and concepts at an abstract level.
- Demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills in complex contexts.
- Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

## **Vocational Graduate Diploma**

*Characteristics of competencies or learning outcomes*

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth, depth and complexity involving the initiation, analysis, design, planning, execution and evaluation of major functions, both broad and highly specialised, in highly varied and highly specialised contexts.
- Further specialisation within a systematic and coherent body of knowledge.
- Applications involve making high-level, fully independent, complex judgements in broad planning, design, operational, technical and management functions in highly varied and highly specialised contexts. They may include full responsibility and accountability for all aspects of work and functions of others, including planning, budgeting and strategy development.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

*Distinguishing features of learning outcomes*

- Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major functions, both broad and within highly varied and highly specialised contexts.
- Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.
- Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.
- Demonstrate full responsibility and accountability for personal outputs.
- Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

## Qualification Pathways

The following sample qualifications pathways charts are provided for developers, to show the type of information that may be included. (They are simplified versions of existing Training Package qualifications pathways charts.) Developers must create a qualifications pathways chart in the industry preferred style. This could be based on the samples provided, or on any of the other of many Training Package qualifications pathways charts to be found on the DEST website at [www.dest.gov.au](http://www.dest.gov.au).

It is assumed that most people new to the industry will start at the Certificate II level. Many people already in the industry should be already partly or wholly qualified at the Certificate II level and will presumably start at their existing level and simply complete any outstanding competency requirements. Due to the recency of the availability of qualifications there is a high level of people in the industry with existing skills but no formal qualifications. For experienced workers in the industry, it may well be appropriate for them to start at the Certificate III (or even Certificate IV or higher) level. Exit at any point is possible.

### Prerequisites

Some units of competency have stated prerequisites. In any approved training scheme, it is expected that competency will be attained in the prerequisite units before it is attained in the unit having the prerequisite(s). In this situation a unit with two prerequisites will be counted as three units towards the qualification once competency has been attained in all units.

In an assessment of existing competency, it is possible to assess the unit and its prerequisites together as an integrated assessment. In this situation a unit with two prerequisites will be counted as three units towards the qualification once competency has been attained in all units.

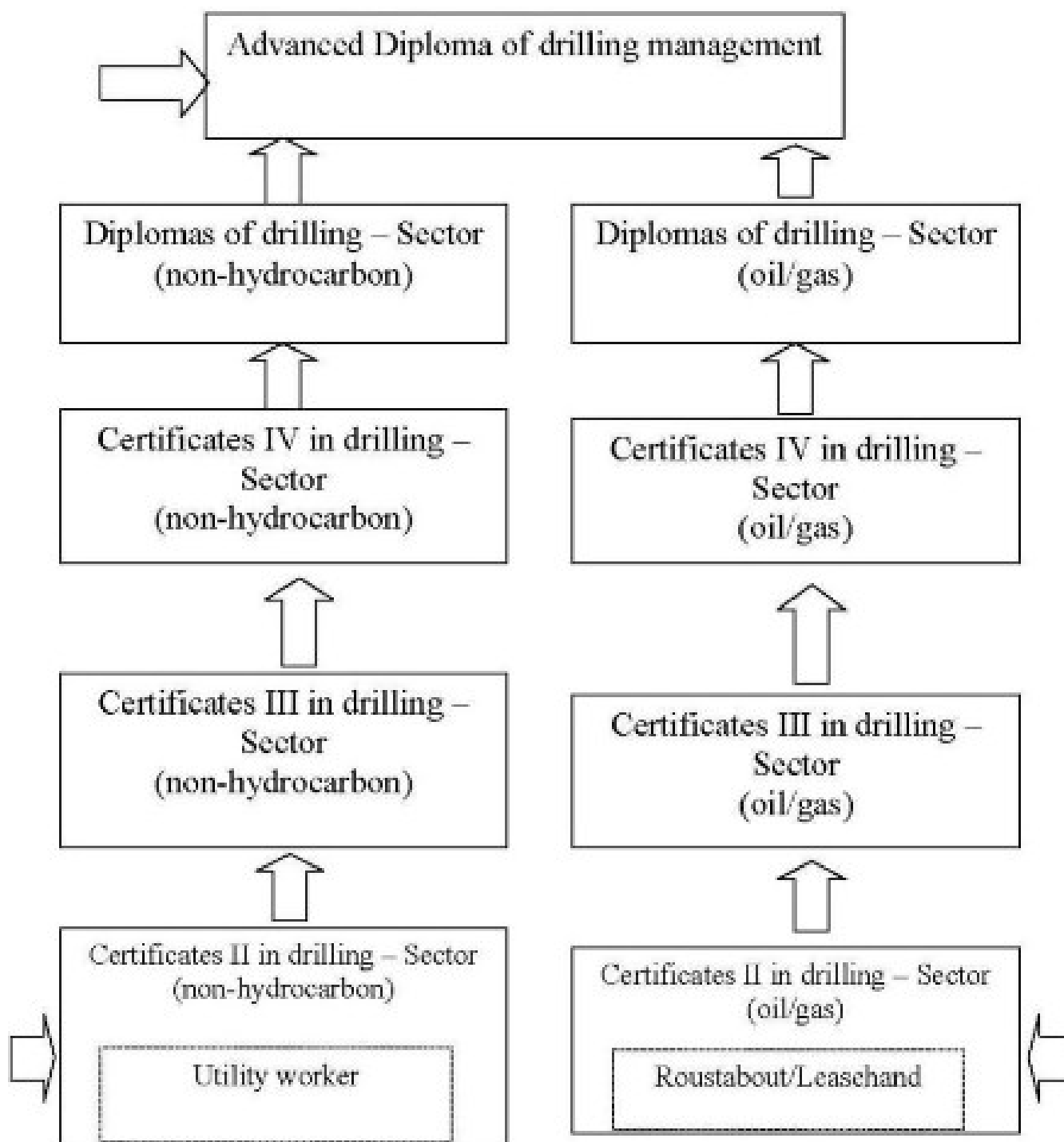
See also qualification rules later in this document.

## Drilling qualifications at a glance

The following diagram indicates the pathway for a person following a structured learning program.



The following diagram indicates the pathway for a person following a structured learning program.



AQF	Common units (all of)	Elective units (as required)	Sector specific (as required)
AQF 6 Field superintendent, installation manager	DRTNHB47A, DRTNHB48A, DRTNHB49A, DRTNHB50A, DRTOG52B, DRTOG53B	DRTOG54B, BSBMGT603A, BSBMGT604A	
AQF 5 Rig manager, Tool pusher	DRTOG39A, DRTOG42A	DRTOG40	DRTOG38B, DRTOG41A DRTOG43A, DRTOG44A DRTOG45A
AQF 4 Driller	DRTOG25B, DRTOG26B DRTOG28B, DRTOG29B DRTOG30B, DRTOG32B DRTOG33B, DRTOG34B DRTOG35B, DRTOG37B DRTNHB38A	BSZ401A, BSZ402A BSZ403A, BSZ404A	DRTOG31B DRTOG36B
AQF 3 Derrickman	DRTOG13A, DRTOG14A DRTOG15A, DRTOG19A DRTOG20A, DRTOG21A DRTOG22A	DRTOGOF20B, DRTOGOF21B	DRTOGON15B DRTOGON17B DRTOGON18B DRTOGON23B DRTOGON24B
AQF 2 Floorman	DRTOG08A, DRTOG09A DRTOG10A, DRTOG11A DRTOG12A	DRTOGOF07B	
Leasehand roustabout	DRTOG01B, DRTOG02B, DRTOG03B, DRTOG04B	DRTOGOF05B DRTOGOF06B	Leasehand DRTOGON06B DRTOGON07B On-shore

Qualifications structure – Drilling industry qualifications – non-hydrocarbon sector

AQF	Common units (all of)	Elective units (as required)	Sector specific (as required)									
Advanced Diploma of Drilling Management												
AQF 6 Operations manager	DRTNHR50A, DRTNHR51A DRTNIB32A, DRTNIB33A DRTOG21L, DRTOG33B	DRTOG54R BSBMGT603A BSBMGT604A	*	*	*	*	*	*	*	*	*	
Diploma of Drilling												
AQF 5 Driller super visor	DRTNIB46A, DRTNIB47A DRTNIB48A, DRTNIB49A	BSBFLM501A, BSBFLM502A BSBFLM503A, BSBFLM504A BSBMGT503A, BSBMGT504A BSBMGT505A, BSBMGT506A	*	*	*	*	*	*	*	*	*	
Certificate IV in Drilling												
AQF 4 Senior driller	DRTNIB41A, DRTNIB42A DRTNIB43A	BSZ401A, BSZ402A, BSZ403A BSZ404A, BSZ405A, BSZ406A BSZ407A, BSZ408A BSBRK3409A, BSBSBM4402A BSBSBM4403A, BSBSBM4404A BSBSBM4405A, BSBSBM4406A BSBSBM4407A	*	*	*	*	*	*	*	*	*	DRTNIB44A DRTNIB45A
Certificate III in Drilling												
AQF 3 Driller	DRTNHR20A, DRTNHR21A DRTNIB32A, DRTNIB23A	DRTNHR24A BSGRKC304A	DRTNIB24A	*	BCC2004	DRTNIB24A	*	*	*	*	*	DRTNIB25A DRTNIB26A
Certificate II in Drilling												
AQF 2 Drillers assistant	DRTNIB05A, DRTNIB06A DRTNIB07A, DRTNIB04A DRTNIB03A, DRTNIB01A	DRTNIB02A, BCC1004A BCC1003A, MNC.G38.A	*	BCC2009	*	*	*	*	*	*	*	
Method units (one or more of)												
Environmental												
Foundation/Construction												
Geotechnical												
TT												
Mineral exploration												
Mineral production and development												
Blast hole												
Seismic												
Water well												

Method units  
(one or more of)  
DRTNIB27A  
DRTNIB28A  
DRTNIB29A  
DRTNIB30A  
DRTNIB31A  
DRTNIB32A  
DRTNIB33A  
DRTNIB34A  
DRTNIB35A  
DRTNIB36A  
DRTNIB37A  
DRTNIB38A  
DRTNIB39A  
DRTNIB40A

Method units  
(one or more of)  
DRTNIB08A  
DRTNIB09A  
DRTNIB10A  
DRTNIB11A  
DRTNIB12A  
DRTNIB13A  
DRTNIB14A  
DRTNIB15A  
DRTNIB16A  
DRTNIB17A  
DRTNIB18A  
DRTNIB19A

Matrix of non-hydrocarbon standards: Certificates II - III  
(Imported units not shown in this matrix)

(Imported units not shown in this matrix)											Common units DRTNHB (All of)				Elective/Sector units DRTNHB (some of)				Method - AQF II (at least one of) DRTNHB										Method AQF III (at least one of)														
	01 OHS	03 Industry	04 Team	05 Mobilise	06 Set up	07 Support	20 Set up	21 Run	22 Maintain	23 Train	02 U/ground	24 Monitor	25 Single/Aq	26 Multi/Aq	08 Air	09 Auger	10 Large Auger	11 Conv Core	12 Wire C	13	14 Guided	15 Directional	16 Mud	17 Raise	18 Cable	19 DHH	27 THH	28 Air	29 Large Auger	30 Conv Core	31 Wire C	32 Guided	33 Directional	34 Ream	35 Pipe	36 Mud	37 Raise	38 Cable	39 DHH	40 THH	Notes		
Certificate II																																											
Environmental	C	C	C	C	C	C									M	M		M	M				M																				
Foundation/Con	C	C	C	C	C	C										M	M																										
Geotechnical	C	C	C	C	C	C									M	M		M	M				M																				
TT	C	C	C	C	C	C														M	M																						
Mineral Explor.	C	C	C	C	C	C					E				M	M		M	M				M																				
Min Prod & Dev.	C	C	C	C	C	C					E				M	M							M				M	M															
Blast Hole	C	C	C	C	C	C					E				M	M											M	M															
Seismic	C	C	C	C	C	C									M	M																											
Water well	C	C	C	C	C	C									M	M							M		M																		
Certificate III																																											
Environmental	X	X	X	X	X	X	C	C	C	C		S																M	M		M	M						M					
Foundation/Con	X	X	X	X	X	X	C	C	C	C																			M	M	M												
Geotechnical	X	X	X	X	X	X	C	C	C	C		S																M	M		M	M						M					1
TT	X	X	X	X	X	X	C	C	C	C																																	
Mineral Explor.	X	X	X	X	X	X	C	C	C	C	X																	M			M	M						M					
Min Prod & Dev	X	X	X	X	X	X	C	C	C	C	X	X																M											M	M			
Blast Hole	X	X	X	X	X	X	C	C	C	C	X	X																M												M	M		2
Seismic	X	X	X	X	X	X	C	C	C	C																		X	X														
Water well	X	X	X	X	X	X	C	C	C	C		E	S	S														X	X								X	X			1,3		

Notes:

C - Common unit required for this qualification	M - Applicable method unit	1	Water well driller's licence may be required to practice
X - Competency recognised for this qualification and included in previous qualification	S - Applicable sector unit	2	Shot firer's licence may be required to practice (see appropriate Mining Training Package)
	E - possible elective unit	3	Aligns with requirements for Class 1 and 2 of Water well driller's licence

**Matrix of oil/gas standards: Certificates II - III**  
(Imported units not shown in this matrix)

	Common units OG																Sector units OGOF					Sector units OGON								Notes
	01	02	03	04	08	09	10	11	12	13	14	15	19	20	21	22	05	06	20	21	06	07	15	17	18	23	24			
Statement of Attainment																														
	C	C	C	C													S	S												
	C	C	C	C																	S	S								
Certificate II																														
Off shore	C	C	C	C	C	C	C	C	C	C							S	S												
On shore	C	C	C	C	C	C	C	C	C	C											S	S								
Certificate III																														
Off shore	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	C	X	X	S	S										
On shore	X	X	X	X	X	X	X	X	X	X	C	C	C	C	C	C					X	X	S	S	S	S	S	S		

Notes:

C	Common unit required for this qualification
X	Competency recognised for this qualification and included in previous qualification
S	Applicable sector unit

## Customising/contextualising advice

### Customising of a qualification

Customising may be done by:

- **choosing** from the units provided in this Training Package to suit the particular situation;
- **specifying** particular combinations of units provided in this Training Package to suit the combination of skills required in the workplace;
- **importing** suitable units from another Training Package as additional elective units.

Note that substitution of 'common' or 'method' units is not permitted. If it is desired to substitute sector or elective units, then the normal procedure for recognition of prior learning/recognition of current competency (RPL/RCC) should be applied.

These units may also be exported to other Training Packages provided the rules below are observed.

### Specifying combinations of units

Certain enterprises may require a particular combination of competencies in their drillers. Individual enterprises may find it appropriate to specify additional prerequisite and/or co-requisite competencies because of their particular requirements. This is permitted, and will change the way in which the units are packaged for the qualification, but in no way increases or decreases the total number of units required for the awarding of a qualification, and must still comply with the overall requirements of the Qualifications Framework.

An example of where this may be desirable is a company which requires its drillers (and their assistants) to be competent across a number of different drilling methods.

### Contextualising units of competency

Contextualising the units provided in this Training Package to better suit a particular situation may be done according to the rules below. Contextualising is typically done by an RTO to make a general unit more specifically applicable to an individual enterprise or situation.

Contextualising rules

Competency **units** may be contextualised by a RTO. Contextualisation which:

- replaces general directions with enterprise specific needs;
- replaces generic equipment/process names with enterprise specific names;
- replaces general processes/specifications with enterprise specific needs;

is allowed and encouraged, provided the contextualised unit is of similar level and rigour to the original unit of competency.

Contextualisation may only be done if it does not significantly change the level and rigour or change the range of applicability of the unit. Contextualisation may be done within the Range Statement and the Evidence Guide. Note also that contextualisation of the Elements or Performance Criteria is not permitted. As a minimum, the contextualised unit should:

- be of similar level and rigour;
- be of a similar breadth, complexity and size;
- be relevant to the industry and the enterprise;
- not reduce the health, safety or environmental requirements;
- retain the original national code number.

## Importing competencies from other Training Packages

Units of competency may be **imported** from another Training Package to customise a **qualification**. These imported units may be used to add to, or where appropriate replace 'elective' units only. The use of imported units is allowed if:

- they are from a set of endorsed competency standards (the original national code number must be retained);
- they are appropriate to the needs of the enterprise;
- they are of an appropriate AQF level;
- any prerequisites and co-requisites specified in the original set of competency standards are also observed.

Common and method units may not be substituted. Units can only be substituted if they do not duplicate, or closely resemble, an existing unit in this Training Package.

## Exporting competencies to other Training Packages

The Australian Drilling Industry Training Committee encourages other industries and ISCs to access the units of competency in this Training Package which might be appropriate to their needs. These competencies may be used provided:

- the original national code number is retained;
- they are only contextualised to the extent permitted above;
- any specified prerequisites and co-requisites are observed;
- the Australian Drilling Industry Training Committee is advised of the specific competencies to be used to facilitate ongoing communication in the event of an update.

## Skill Sets

### Definition

Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

### Wording on Statements of Attainment

Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.

Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording 'these competencies meet [the relevant skill set title or industry need is included]' on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package.

All Statements of Attainment must include the wording 'A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from a nationally recognised qualification'. The following may also be used 'these competencies form part of the [the relevant qualification(s) code and title are inserted]'.

This section below provides information on skill sets within this Training Package, with the following important disclaimer: **Readers should ensure that they have also read the part of the Training Package that outlines licensing and regulatory requirements.**

## Skill Sets in this Training Package

Where this section is blank, nationally recognised skill sets have yet to be identified in this industry.

# Assessment Guidelines

## Introduction

These Assessment Guidelines provide the endorsed framework for assessment of units of competency in this Training Package. They are designed to ensure that assessment is consistent with the Australian Quality Training Framework (AQTF) *Standards for Registered Training Organisations*. Assessments against the units of competency in this Training Package must be carried out in accordance with these Assessment Guidelines.

## Assessment System Overview

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF requirements; licensing/registration requirements; and assessment pathways.

### Benchmarks for Assessment

Assessment within the National Training Framework is the process of collecting evidence and making judgements about whether competency has been achieved to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the relevant endorsed unit of competency.

In the areas of work covered by this Training Package, the endorsed units of competency are the benchmarks for assessment. As such, they provide the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

## Australian Quality Training Framework Assessment Requirements

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirements of the AQTF as expressed in the *Standards for Registered Training Organisations*.

The *Standards for Registered Training Organisations* can be downloaded from the DEST website at [www.dest.gov.au](http://www.dest.gov.au) or can be obtained in hard copy from DEST. The following points summarise the assessment requirements under the AQTF.

### Registration of Training Organisations

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering/Course Accrediting Body in accordance with the *Standards for Registered Training Organisations*. The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration. See Section 1 of the *Standards for Registered Training Organisations*.

### Quality Training and Assessment

Each RTO must have systems in place to plan for and provide quality training and assessment across all its operations. See Standard 1 of the *Standards for Registered Training Organisations*.

### Assessor Competency Requirements

Each person involved in training, assessment or client service must be competent for the functions they perform. See Standard 7 of the *Standards for Registered Training Organisations* for assessor competency requirements. Standard 7 also specifies the competencies that must be held by trainers.



## **Assessment Requirements**

The RTOs assessments must meet the requirements of the endorsed components of Training Packages within its scope of registration. See Standard 8 of the *Standards for Registered Training Organisations*.

## **Assessment Strategies**

Each RTO must identify, negotiate, plan and implement appropriate learning and assessment strategies to meet the needs of each of its clients. See Standard 9 of the *Standards for Registered Training Organisations*.

## **Mutual Recognition**

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See Standard 5 of the *Standards for Registered Training Organisations*.

## **Access and Equity and Client Services**

Each RTO must apply access and equity principles, provide timely and appropriate information, advice and support services that assist clients to identify and achieve desired outcomes. This may include reasonable adjustment in assessment. See Standard 6 of the *Standards for Registered Training Organisations*.

## **Partnership Arrangements**

RTOs must have, and comply with, written agreements with each organisation providing training and/or assessment on its behalf. See Standard 1.6 of *Standards for Registered Training Organisations*.

## **Recording Assessment Outcomes**

Each RTO must have effective administration and records management procedures in place, and must record AQF qualifications and Statements of Attainment issued. See Standards 4 and 10.2 of the *Standards for Registered Training*.

## **Issuing AQF Qualifications and Statement of Attainment**

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the *AQF Implementation Handbook* and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued where the individual is assessed as competent against fewer units of competency than required for an AQF qualification. See Standard 10 and Section 2 of the *Standards for Registered Training Organisations*.

This section provides information on licensing/registration requirements for this Training Package, with the following important disclaimer.

Licensing and registration requirements that apply to specific industries, and vocational education and training, vary between each State and Territory, and can regularly change. The developers of this Training Package, and DEST, consider that the licensing/registration requirements described in this section apply to RTOs, assessors or candidates with respect to this Training Package. While reasonable care has been taken in its preparation, the developers of this Training Package and DEST cannot guarantee that the list is definitive or accurate at the time of reading; the information in this section is provided in good faith on that basis.

Contact the relevant State or Territory Department(s) to check if the licensing/registration requirements described below still apply, and to check if there are any others with which you must comply. For further information contact the relevant State or Territory authority.

## Requirements for Assessors

In order to conduct assessment for statutory licensing or other industry registration requirements, assessors must meet the requirements outlined in the following chart, in addition to the AQTF requirements.

## Requirements for RTOs

Selected units of competency and qualifications in this Training Package provide the basis for a range of statutory licensing and industry registration arrangements. To satisfy these licensing and registration arrangements, RTOs must meet the additional requirements detailed in the following chart.

## Requirements for Candidates

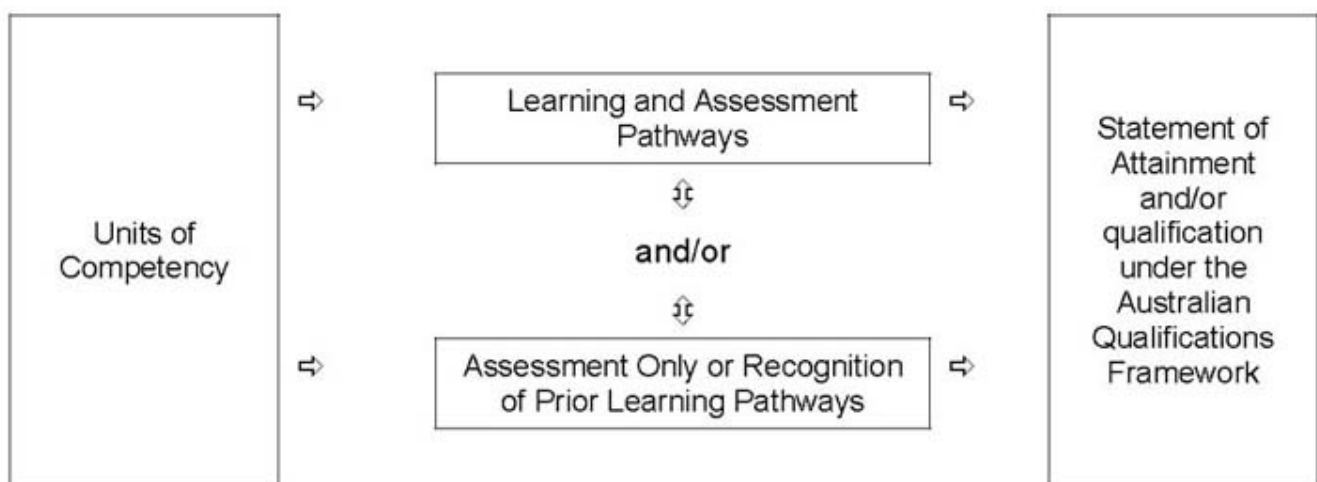
Individuals being assessed under statutory licensing and industry registration systems must comply with training and experience requirements additional to the minimum requirements identified in this Training Package.

## Pathways

The competencies in this Training Package may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.



Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired.

Assessment, by any pathway, must comply with the assessment requirements set out in the *Standards for Registered Training Organisations*.

## Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment

process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit New Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

### **Assessment-Only or Recognition of Prior Learning Pathway**

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were achieved.

In an assessment-only or Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor, such as in the compilation of portfolios; or directed by the assessor, such as through observation of workplace performance and skills application, and oral and/or written assessment. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of Standard 8.2 of the *Standards for Registered Training Organisations* must be met.

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, and work samples. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the relevant endorsed unit of competency)
- reliable (shows that the candidate consistently meets the endorsed unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency), and
- sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).

The assessment only or recognition of prior learning pathway is likely to be most appropriate in the following scenarios:

- candidates enrolling in qualifications who want recognition for prior learning or current competencies
- existing workers
- individuals with overseas qualifications
- recent migrants with established work histories
- people returning to the workplace, and
- people with disabilities or injuries requiring a change in career.

### **Combination of Pathways**

Where candidates for assessment have gained competencies through work and life

experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

### Assessor Requirements

This section identifies the mandatory competencies for assessors, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

### Assessor Competencies

The *Standards for Registered Training Organisations* specify mandatory competency requirements for assessors. For information, Standard 7.3 from the *Standards for Registered Training Organisations* follows:

7.3	<b>a</b>	The RTO must ensure that assessments are conducted by a person who has:
		<ul style="list-style-type: none"><li>the following competencies* from the Training Package for Assessment and Workplace Training, or demonstrated equivalent competencies:<ul style="list-style-type: none"><li>TAAASS401A Plan and organise assessment;</li><li>TAAASS402A Assess competence;</li><li>TAAASS404A Participate in assessment validation;</li><li>relevant vocational competencies, at least to the level being assessed.</li></ul></li></ul>
	<b>b</b>	However, if a person does not have all of the competencies in Standards 7.3 <b>a</b> (i) and the vocational competencies as defined in 7.3 <b>a</b> (ii), one person with the competencies listed in Standard 7.3 <b>a</b> (i), and one or more persons who have the competencies listed in Standard 7.3 <b>a</b> (ii) may work together to conduct assessments.
		* A person who holds the competencies BSZ401A Plan assessment, BSZ402A Conduct assessment, and BSZ403A Review assessment from the Training Package for Assessment and Workplace Training will be accepted for the purposes of this standard. A person who has demonstrated equivalent competencies to BSZ401A and BSZ402A and BSZ403A in the period up to 12 months following publication of the Training and Assessment Training Package will also be accepted for the purposes of this standard.

## Designing Assessment Tools

This section provides an overview on the use and development of assessment tools.

### Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

### Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these are benchmarked, or mapped, against the current version of the relevant unit of competency. This can be done by checking that the materials are listed on the National Training Information Service (<http://www.ntis.gov.au>). Materials on the list have been noted by the National Quality Council as meeting their quality criteria for Training Package support materials.

## Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the validation of assessment strategies as required under 9.2 (i) of the *Standards for Registered Training Organisations*
- meet the assessment requirements expressed in the *Standards for Registered Training Organisations*, particularly Standards 8 and 9.

A key reference for assessors developing assessment tools is TAA04 Training and Assessment Training Package and the unit of competency TAAASS403A *Develop assessment tools*. There is no set format or process for the design, production or development of assessment materials.

## Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

### Mandatory Assessment Requirements

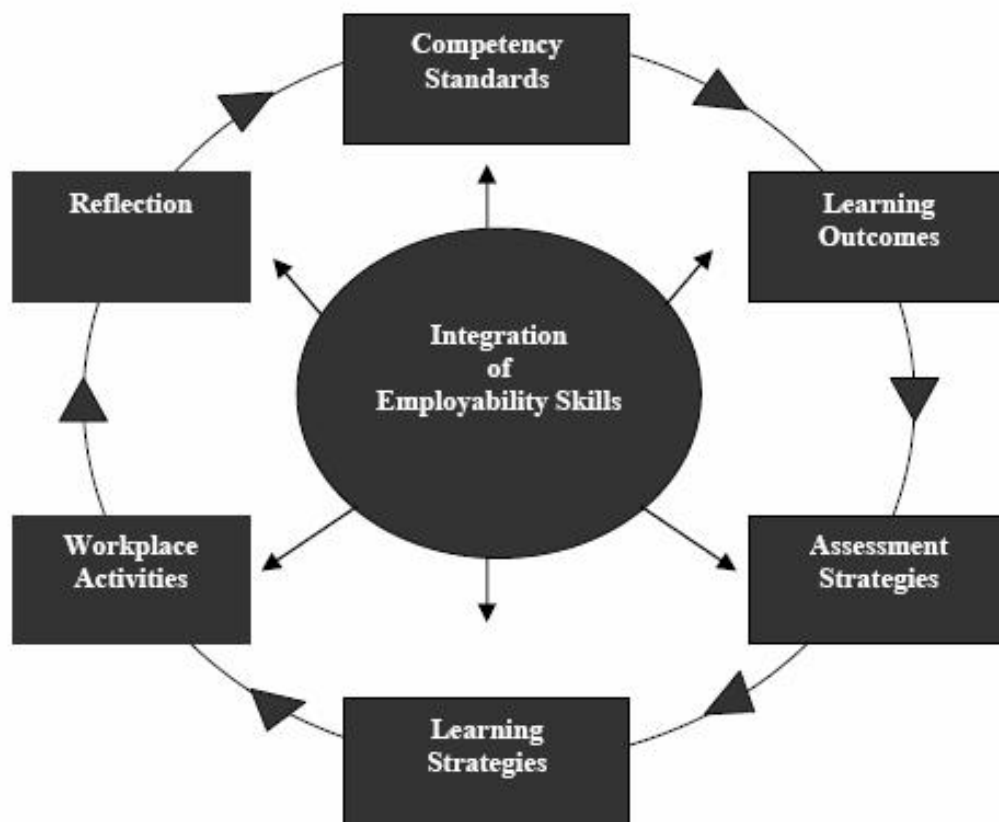
Assessments must meet the criteria set out in Standard 8 from the *Standards for Registered Training Organisations*. For information, Standard 8 from the *Standards for Registered Training Organisations* is reproduced below.

8		RTO Assessments
		The RTOs assessments meet the requirements of the endorsed components of Training Packages and the outcomes specified in accredited courses within the scope of its registration.
8.1		The RTO must ensure that assessments (including RPL):
	i.	comply with the assessment guidelines included in the applicable nationally endorsed Training Packages or the assessment requirements specified in accredited courses;
	ii.	lead to the issuing of a statement of attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed unit(s) of competency in the applicable Training Package or modules specified in the applicable accredited course;
	iii.	are valid, reliable, fair and flexible;
	iv.	provide for applicants to be informed of the context and purpose of the assessment and the assessment process;
	v.	where relevant, focus on the application of knowledge and skill to standard of performance required in the workplace and cover all aspects workplace performance, including task skills, task management skills, contingency management skills and job role environment skills;

	vi.	involve the evaluation of sufficient evidence to enable judgements to be made about whether competency has been attained;
	vii.	provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options in relation to those outcomes;
	viii.	are equitable for all persons, taking account of individual needs relevant to the assessment; and
	ix.	provide for reassessment on appeal.
8.2	a	The RTO must ensure that RPL is offered to all applicants on enrolment
	b	The RTO must have an RPL process that:
		i. is structured to minimise the time and cost to applicants; and ii. provides adequate information, support and opportunities for participants to engage in the RPL process.

### Delivery and assessment of Employability Skills

Employability Skills are integral to workplace competency and, as such, must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.



Training providers must analyse the Employability Skills information contained in units of competency in order to design valid and reliable learning and assessment strategies. This analysis includes:

- reviewing unit(s) of competency to determine how each relevant Employability Skill is found and applied within the unit

- analysing the Employability Skills Summary for the qualification in which the unit(s) is/are packaged to help clarify relevant industry/workplace contexts with regard to the application of Employability Skills at that qualification level
- designing learning and assessment activities that address the Employability Skills requirements.

For more information on Employability Skills in Resources and Infrastructure Industry Skills Council Training Packages go to the Resources and Infrastructure Industry Skills Council website at <http://www.riisc.com.au>.

## Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities. Adjustments include any changes to the assessment process or context that meet the individual needs of the person with a disability, but do not change competency outcomes. Such adjustments are considered reasonable if they do not impose an unjustifiable hardship on a training provider or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.

## Recommendations for assessment in the Drilling Industry

### General issues

Assessment of competency will be in accordance with the relevant drilling industry sector and state legislation applying in each state and territory. This will include:

- Duty of care requirements;
- Occupational Health and Safety Acts and Regulations;
- Environmental Protection Acts and Regulations;
- Heritage Protection Acts and Regulations;
- Petroleum Acts and Regulations.

In certain circumstances other legislation/regulation will also be relevant including:

- Mining Acts and Regulations;
- Submerged Lands Acts and Regulations;
- Dangerous Goods Regulations;
- Water Drilling Licensing requirements.

For some job outcomes in the industry there will be additional requirements such as first aid and heavy truck licence. Required job outcomes and local regulations will determine the need for these additional 'tickets'/licences.

Wherever possible integrated assessment, which reflects the grouping of competencies as they would be demonstrated in an actual work role, is the preferred means of assessment. The context of the assessment is defined in each unit of competency.

Where units of competency have been imported from another Training Package (ie. the unit code does NOT have the 'DRT' prefix), the RTO responsible for the assessment should check the assessment guidelines covering those units of competency in their source Training Package.

Evidence gathering methods must be equitable to all groups of participants. Assessment

procedures should also be culturally appropriate for the individual and the situation. Reasonable adjustments should be made to assessment procedures for people with special needs such as people with disabilities or with language or literacy difficulties. The language and literacy requirements of the assessment process should not exceed the language and literacy requirements of the particular level of work in the industry.

## **Assessment considerations**

Some sections of the industry operate in remote areas which are not conducive to multiple visits from assessors. The competency however requires a consistent performance which may not be assessable by a single site visit. The assessment design may therefore need to include other evidence such as:

- third party report;
- range of documentation completed by the candidate (such as drill logs);
- statement of curricular activities verified by the supervisor;
- evidence of training undertaken and course outline details;

which can be collected/viewed by the assessor to aid in the judgement of consistent performance to the required standard.

Assessing using a formal assessment team in the one place at the one time is often not practical and so the assessor will frequently need to rely on evidence provided by supervisors, other work colleagues, written records and documentation to assist in making the judgement of competency.

Interviews, questioning of the candidate and formal answers to written or oral tests customised and documented by the assessor or RTO may be gathered as evidence for judging competency subject to audit by the RTO issuing the qualification or statement of attainment. Units of competency have generally been written with a focus on a workplace assessment environment. Where this is obligatory it is identified in the unit descriptor or context of assessment statement.

Utility worker units and some lower numbered AQF II level competencies are for the most part, generally intended to be assessed off active drill sites, either in a training room, workshop or company yard environment prior to real field conditions and with appropriate supervision. Many units include problem solving aspects. These aspects may be best assessed by using evidence of past problems solved and/or by using a range of scenarios/case studies/what ifs as the stimulus with 'walk throughs' (a person demonstrating what they would do without necessarily doing it) forming part of the response. These scenarios/case studies/what ifs should include a range of problems, including typical and, for AQF IV and above, unusual situations which have been generated from the past drilling experience, risk assessment activities and similar sources.

## **Validity and fairness of assessment**

The assessment environment should not disadvantage the candidate.

Assessment practices shall take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English.

Assessors must ensure that assessment processes do not place inappropriate emphasis on language, literacy or numeracy and do not disadvantage candidates on inappropriate grounds such as gender or cultural background. The literacy required for assessment should not be greater than that required for the actual task. Exclusive reliance on written assessment may unfairly disadvantage some candidates and could lead to an incorrect decision.

Reasonable adjustments are to be made to ensure equity in assessment for people with



disabilities. This means that wherever possible, 'reasonable' adjustments are to be made to meet the individual needs of a person with a disability. Adjustments are considered 'reasonable' if they do not impose an unjustifiable hardship on a training provider or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.

### **Assessment design considerations**

Most units of competency in the DRT03 Training Package have a number of main components:

- a set of essential knowledge which is required for the competent performance of the skills which comprise the unit of competency and which is listed in the unit of competency both as part of the performance criteria and also in the evidence guide;
- a set of routine skills which will be typically performed on a regular basis on the job and which are the basis of the elements and performance criteria;
- a set of non-routine skills (typically for emergency response and AQF IV drilling units) which are vital to the safe and efficient operation of the plant/process over the medium to long term and which are included in the elements and performance criteria but which may not be performed on a regular basis.

The assessment design needs to incorporate features which will ensure adequate evidence is gathered for each of these components.

### **Underpinning knowledge**

It will be difficult, and often impossible, to gather sufficient evidence of the required essential knowledge by means of direct observation alone. It will be necessary to include some form of questioning, which may, or may not, be concurrent with direct observation. Questioning should not rely on written communication to any greater degree than is otherwise required by the unit of competency. The use of diagrams and sketching, demonstration and description along with third party evidence should be allowable within the assessment of essential knowledge.

### **Routine skills**

Sufficient evidence of competent performance of routine skills may be obtained by direct observation. However, observation on more than one occasion would be required if direct observation is the sole evidence gathering method used as the observation needs to include performance of the skills under a range of all normal and some abnormal conditions. As multiple direct observations are often impractical, other evidence gathering tools (such as supervisor and other third party reports) should be included to gather evidence of consistent performance under a range of conditions. The emphasis is on evidence of competent performance rather than on direct observation, and this may come from drill logs, work colleagues and other sources.

It should be noted that there are national industry assessment tools (available through ADITC) which may be used either directly or as models to develop customised tools. Workplaces or assessors may also wish to develop their own specific assessment tools to complement the national tools or as an alternative to the national tools.

### **Non-routine skills**

By their nature the non-routine skills are unlikely to be able to be assessed adequately by direct observation. These skills include problem solving and emergency response and it would be inappropriate to set up a situation, or to wait for a situation to occur, which would allow for direct observation.

In most cases, the use of third party evidence, such as from supervisors and other work colleagues will be the most practical form of evidence for non-routine skills. This implies that a person will not be deemed competent in these non-routine skills until they have had a range of experience which will allow them to have accumulated evidence of their ability to handle non-routine situations.

In some situations, such as emergency response, some appropriate form of simulation (e.g. a fire drill) may be the best form of gathering sufficient, appropriate evidence of competence. Case studies may be appropriate in some circumstances to increase the evidence available. Simulation/case studies may also be used for safety and cost effectiveness reasons. These approaches are defined as:

- simulation - a structured resource-based exercise which seeks to simulate real life situations and requires the assessee to achieve a specific task;
- case study - an assessment tool which presents a simulated context and provides assessees with opportunities to display problem solving and decision making skills.

Where the appropriate choice between these is restricted, this will be stated in the unit of competency.

Generally, where:

- physical skills are significant (e.g. emergency procedures), then a simulation may be the preferred method (this may require coordination with a regular 'safety drill') ;
- cognitive skills are significant (e.g. problem solving) then a case study may be the preferred method.

It is recommended that at least two different methods of gathering evidence be used in any assessment. Methods of gathering evidence for an assessment may include:

- direct observation;
- demonstration on the job;
- third party reports e.g. peer/team leader/360 0 review;
- questioning - written, verbal;
- workplace documents - logs, reports etc;
- scenarios/case studies;
- projects;
- simulation, routine drills;
- interview.

### **Integrated (holistic) assessment**

Notwithstanding the above, it is the intention that the ability to perform the unit of competency as a whole be the key criterion in any assessment process.

Further, it is frequently appropriate to assess more than one unit of competency at the same time, e.g. because certain competencies are only practised in combination with other competencies (e.g. working in a team with an appropriate drilling unit). The assessment of more than one unit of competency concurrently is desirable, provided adequate evidence is gathered for each competency involved.

The unit of competency may include suggestions for assessment in conjunction with other units.

### **Further Sources of Information**

The section provides a listing of useful contacts and resources to assist assessors in

planning, designing, conducting and reviewing of assessments against this Training Package.

## Contacts

## Contacts

### Resources and Infrastructure Industry Skills Council

Level 7, 36 Carrington Street

SYDNEY NSW 2000

Telephone: (02) 9299 3014

Fax: (02) 9299 3015

Web: [www.riisc.com.au](http://www.riisc.com.au)

Email: [riisc@riisc.com.au](mailto:riisc@riisc.com.au)

Copies of the latest documents are available from:

### Australian Drilling Industry Training Committee Ltd

PO Box 742

Lane Cove NSW 2066

Phone +61 2 9428 3444

Fax +61 2 9428 3555

Website: [www.aditc.com.au](http://www.aditc.com.au)

email: [info@aditc.com.au](mailto:info@aditc.com.au)

The National Training Information Service (<http://www.ntis.gov.au>) also displays any changes in units of competency and the packaging of qualifications.

TVET Australia Ltd

Level 21, 390 St Kilda Road

MELBOURNE VIC 3004

PO Box 12211

A'Beckett Street Post Office

MELBOURNE VIC 8006

Telephone: (03) 9832 8100

Fax: (03) 9832 8199

Web: [www.atpl.net.au](http://www.atpl.net.au)

Email: [sales@atpl.net.au](mailto:sales@atpl.net.au)

Innovation and Business Industry Skills Council

Building B, Level 2

192 Burwood Road

HAWTHORN VIC 3122

Telephone: (03) 9815 7000

Fax: (03) 9815 7001

Email: [virtual@ibsa.org.au](mailto:virtual@ibsa.org.au)

## General Resources

Refer to <http://antapubs.dest.gov.au/publications/search.asp> to locate the following ANTA publications.

*AQF Implementation Handbook, third Edition*. Australian Qualifications Framework Advisory Board, 2002, [aqf.edu.au](http://aqf.edu.au)

Australian Quality Training Framework (AQTF) - for general information go to:  
[www.dest.gov.au/sectors](http://www.dest.gov.au/sectors)

Australian Quality Training Framework (AQTF) - for resources and information go to:  
[www.dest.gov.au](http://www.dest.gov.au)

Australian Quality Training Framework *Standards for Registered Training Organisations*, Australian National Training Authority, Melbourne, 2005. Available in hard copy from State and Territory Training Authorities or can be downloaded from [www.dest.gov.au](http://www.dest.gov.au)

*TAA04 Training and Assessment Training Package*. This is available from the Innovation and Business Skills Australia (IBSA) Industry Skills Council and can be viewed, and components downloaded, from the National Training Information Service (NTIS). National Training Information Service, an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - [www.ntis.gov.au](http://www.ntis.gov.au) *Style Guide for Training Package Support Materials*, Australian National Training Authority, Melbourne, 2003. Can be downloaded from the ANTA page at [www.dest.gov.au](http://www.dest.gov.au)

## Assessment Resources

*Training Package Assessment Guides* - a range of resources to assist RTOs in developing Training Package assessment materials developed by DEST with funding from the Department of Education, Training and Youth Affairs. It is made up of 10 separate titles, as described at the ANTA publications page of [www.dest.gov.au](http://www.dest.gov.au). Go to [www.resourcegenerator.gov.au/loadpage.asp?TPAG.htm](http://www.resourcegenerator.gov.au/loadpage.asp?TPAG.htm)

Printed and/or CD ROM versions of the Guides can be purchased from Australian Training Products (ATP). The resource includes the following guides:

- 1 Training Package Assessment Materials Kit
- 2 Assessing Competencies in Higher Qualifications
- 3 Recognition Resource
- 4 Kit to Support Assessor Training
- 5 Candidates Kit: Guide to Assessment in New Apprenticeships
- 6 Assessment Approaches for Small Workplaces
- 7 Assessment Using Partnership Arrangements
- 8 Strategies for ensuring Consistency in Assessment
- 9 Networking for Assessors
- 10 Quality Assurance Guide for Assessment

An additional guide "Delivery and Assessment Strategies" has been developed to complement these resources.

## Assessment Tool Design and Conducting Assessment

VETASSESS & Western Australian Department of Training and Employment 2000, *Designing Tests - Guidelines for designing knowledge based tests for Training Packages*. Vocational

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Education and Assessment Centre 1997, *Designing Workplace Assessment Tools, A self-directed learning program*, NSW TAFE.

Manufacturing Learning Australia 2000, *Assessment Solutions*, Australian Training Products, Melbourne.

Rumsey, David 1994, *Assessment practical guide*, Australian Government Publishing Service, Canberra.

## **Assessor Training**

Australian Committee on Training Curriculum (ACTRAC) 1994, *Assessor training program - learning materials*, Australian Training Products, Melbourne.

Australian National Training Authority, *A Guide for Professional Development*, ANTA, Brisbane.

Australian Training Products Ltd *Assessment and Workplace Training, Training Package - Toolbox*, ATPL Melbourne.

Green, M, et al. 1997, *Key competencies professional development Package*, Department for Education and Children's Services, South Australia.

Victorian TAFE Association 2000, *The professional development CD: A learning tool*, VTA, Melbourne.

## **Assessment System Design and Management**

Office of Training and Further Education 1998, *Demonstrating best practice in VET project - assessment systems and processes*, OTFE Victoria.

Toop, L., Gibb, J. & Worsnop, P. *Assessment system designs*, Australian Government Publishing Service, Canberra.

Western Australia Department of Training and VETASSESS 1998, *Kit for Skills Recognition Organisations*, WADOT, Perth.

**DRTNHB50A****Unit Descriptor****Employability Skills****Application of the Unit****Manage business operations**

This unit is relevant to senior managers or an owner of a small business.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTNH20A
- **Links to other units:** None
- **Links outside this Training Package:** None

**Unit Sector**

Non-hydrocarbon

**ELEMENT****PERFORMANCE CRITERIA**

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| 1. Evaluate a business opportunity.    | 1.1 Actively pursue sources of information about a business opportunity in line with business interests and values.<br>1.2 Evaluate the new business opportunity against current business involvement to identify overlaps, compatibilities and clashes.   |
| 2. Prepare business plans and budgets. | 2.1 Develop the business plan on the basis of information obtained through research into customer needs, resource requirements and business viability.<br>2.2 Identify sales strategies to optimise market exposure and profitability through the business plan.<br>2.3 Develop plans and budgets to achieve the organisation's goals and strategies and to meet client needs.<br>2.4 Ensure plans contain a clear statement of priorities and schedules.<br>2.5 Communicate the business plan clearly to relevant stakeholders and staff to ensure their understanding and support.<br>2.6 Identify resource implications of the plans and devise strategies for their acquisition and use.<br>2.7 Establish pricing systems consistent with organisation's requirements. |
| 3. Implement operational strategies.   | 3.1 Carry out the provision of goods/services in accordance with established technical, legal and ethical standards.<br>3.2 Establish systems to control expenditure, wastage, stock and costs in accordance with the business plan.<br>3.3 Develop quality procedures to address product/service and client requirements.<br>3.4 Identify business relationships with external sources and negotiate a range of acceptable outcomes<br>3.5 Undertake research and/or development of new technology to improve business opportunities.   |

- |  |   |
|--|---|
| 4. Implement and monitor continuous improvement systems and processes. | 4.1 Use the organisation's systems and technology to monitor progress and to identify ways in which planning and operations could be improved.<br>4.2 Investigate performance deviations and analyse to establish causes and implement changes in procedures.<br>4.3 Change operational policies and procedures to incorporate corrective action taken.<br>4.4 Communicate the organisation's continuous improvement processes to individuals/teams.<br>4.5 Inform individuals/teams, where appropriate, of savings and productivity improvements in achieving the business plan.   |
| 5. Manage finances.  | 5.1 Calculate the financial requirements to establish, profitably operate and extend the business.<br>5.2 Identify the capital, profitability and cash flow requirements to enable the business to operate according to plan.<br>5.3 Make adequate financial provision for taxation, superannuation and accruing staff leave.<br>5.4 Establish and maintain essential books and records to ensure ongoing accessibility of financial records.<br>5.5 Conduct financial and statutory reporting in accordance with legal and administrative requirements.<br>5.6 Prepare cash flow estimates for each forward period.<br>5.7 Take appropriate action to ensure the achievement of profit and return on investment targets. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Underpinning knowledge and skills:

- Legal rights and responsibilities
- All relevant statutory and regulatory requirements which affect a small business
- Inspection/research techniques for collection of data
- Analysis and problem solving techniques
- Contractual rights and responsibilities
- Planning and control systems (sales, advertising and promotion, logistics)
- Record keeping systems
- Communication systems, processes and procedures

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Management must comply with statutory/legal requirements which may include:

- Environmental - noise/air/water
- Zonings
- Boundaries
- Rehabilitation
- Contamination
- Mineral resources/water authorities or appropriate body

Business plans may include:

- Long term plans
- Short term plans
- Strategic plans
- Marketing plans

The comprehensiveness and extent of detailed documentation in the business plan will depend on a range of factors, which may include:

- Proposed size and scale of business
- Market focus of the business
- Need to raise finance, and requirements of lenders
- Level of risk involved

External sources of funds may include:

- Banks
- Accountants
- Legal representatives
- Sub-contractors
- Suppliers of services
- Suppliers of capital equipment
- Government departments

Costs may include:

- Operational
- Capital
- Ownership
- Consumables
- Total unit

Operational factors may include:

- Business premises (size, location, layout)
- Plant and equipment
- Physical and natural resources (e.g. land, fences, water supply)
- Methods/techniques/technology
- Management and administrative systems and procedures
- Computing facilities



Numerical calculations required for managing a business may include:

- Basic arithmetical calculations - addition, subtraction, multiplication, division
- Place value for whole numbers and decimals
- Percentages
- Estimation (e.g. quantities/resources/time)
- Interpretation of statistical diagrams, including tables, charts and graphs

Calculations may be made by calculator or software applications

Financial books and records may include:

- Job costing
- Quotations
- Income and expenditure records
- Petty cash book
- Taxation
- Wages/salaries books
- Files of paid purchase and service invoices
- Insurance
- Time sheets
- Bank account records
- Credit card transaction records

Records may be paper-based or computerised

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

- Demonstrates effectiveness of documented business plan, market research, operational plan, financial strategies/reports
- Achieves business and performance plans
- Maintains a profit/productivity focus in managing resources
- Records information, and reports to designated individuals/groups within established accountability requirements
- Adapts to new situations using appropriate strategies (e.g. innovation, persistence, resourcefulness and contingency planning)

### Interdependent assessment of units

Co-assessment may occur with other relevant units.

### Resource implications

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that business operations can be managed under a range of typical conditions.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects and other appropriate mechanisms which simulate a workplace environment.

## DRTNHB51A

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Manage human resources

This unit is relevant to senior managers or an owner of a small business.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTNH21A
- **Links to other units:** None
- **Links outside this Training Package:** None

#### Unit Sector

Non-hydrocarbon

#### ELEMENT

#### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| 1. Develop human resource strategies.   | 1.1 Develop an appropriate organisational structure for the business to ensure all functions are fulfilled.<br>1.2 Determine human resource requirements to perform tasks and specify in terms of number of staff, time commitment and competencies required.<br>1.3 Identify existing skills/competencies of self and staff and compare with requirements to identify any gaps.<br>1.4 Schedule tasks systematically and efficiently to optimise utilisation of available human resources.<br>1.5 Structure communication channels effectively.<br>1.6 Select systems for recording staff data to provide timely and accurate information.<br>1.7 Put industrial agreements in place in accordance with current workplace and industrial requirements.<br>1.8 Develop strategies for providing formal warnings and for terminating employees which conform to legislative requirements. |
| 2. Implement human resource strategies. | 2.1 Manage work responsibilities so that available staff resources balance the functions and responsibilities required by business.<br>2.2 Communicate objectives, responsibilities and performance measures to each employee and obtain their agreement (written if appropriate) to ensure expectations are understood.<br>2.3 Recognise/reward effective staff contributions to the business.<br>2.4 Perform recruitment, promotion and termination functions ethically and in accordance with legal requirements.<br>2.5 Manage complex IR problems or refer to appropriate authorities.  |

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| 3. Provides leadership in the workplace.   | 3.1 Serve as positive role model for others through high standards of performance.<br>3.2 Performance meets the organisation's requirements.<br>3.3 Develop performance plans and implement in accordance with the organisation's goals and objectives.<br>3.4 Influence individuals and drilling crews in a positive manner.   |
| 4. Organise and manage team performance.   | 4.1 Establish and maintain effective working relationships in the workplace through provision of appropriate leadership, support, communication and feedback.<br>4.2 Encourage and develop team work.<br>4.3 Define individual and team responsibilities and levels of authority clearly to enhance clear communication and understanding of performance expectations.<br>4.4 Review the performance of individuals and teams regularly in terms of agreed performance measures.<br>4.5 Establish strategies to create a learning environment in which the team members share their expertise and experiences.<br>4.6 Encourage employees to extend or develop relevant competencies by taking opportunities for training.<br>4.7 Maximise benefits to personal and business performance through effectively managing diversity of employees. |
| 5. Access and share legislation codes and standards.   | 5.1 Make legislation, standards and the organisation's policies and practices relevant to the creation and maintenance of a safe workplace and environment available to individuals/teams.<br>5.2 Make arrangements to provide information in a language, style and format which is understood by colleagues.<br>5.3 Ensure individuals/teams know their legal responsibility for maintaining a safe workplace and environment.<br>5.4 Ensure the implications of an unsafe workplace and environment are clear to all within the workplace.  |
| 6. Establish and maintain the organisation's occupational health and safety/ environmental training program. | 6.1 Identify occupational health and safety/environmental training needs accurately.<br>6.2 Develop and implement an occupational health and safety/environmental training program to identify and fulfil employees' training needs as part of the organisation's general training program.<br>6.3 Make arrangements for fulfilling identified occupational health and safety/environmental training needs in both on and off-the-job training programs in consultation with relevant parties.<br>6.4 Comply with occupational health and safety/environmental regulatory requirements regarding training.  |

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|--|--|
| 7. Establish and maintain a system for maintaining occupational health and safety/environmental records. | 7.1 Complete occupational health and safety/environmental records for work area accurately and legibly and maintain in accordance with workplace and legal requirements.<br>7.2 Use aggregate information from the area's occupational health and safety/environmental records to identify hazards and monitor risk treatment procedures according to organisational procedures. |
|--|--|

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Underpinning knowledge and skills:

- Legal rights and responsibilities
- All relevant statutory and regulatory requirements which affect a small business
- Safety legislation, standards and procedures
- Inspection/research techniques for collection of data
- Analysis and problem solving techniques
- Record keeping systems
- Communication systems, processes and procedures
- Alternative leadership styles (e.g. role model, consensus, authoritarian)
- Legal and regulatory aspects of employing or contracting human resources

## RANGE STATEMENT

Human resource requirements of a small business may be met through engaging full-time, or part time staff on a permanent, temporary or casual basis. Human resources may involve self only and may include family and/or friends whose services are employed in the business.

Small businesses may include as few as one to five employees. Human resource requirements for such small businesses follow the same principles, but may require a less complex approach to management.

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| Numerical calculations required for managing a business may include: | <ul style="list-style-type: none"> <li>• Percentages</li> <li>• Estimation (e.g. quantities/resources/time)</li> <li>• Interpretation of statistical diagrams, including tables, charts, and graphs</li> </ul> |
|--|--|

Calculations may be made by calculator

- |                                  |  |
|----------------------------------|--|
| Appropriate records may include: | <ul style="list-style-type: none"> <li>• Job/position descriptions</li> <li>• Employee records</li> <li>• Records of taxation and superannuation payments made</li> <li>• Occupational health and safety reports, minutes of meetings</li> <li>• Environmental reports</li> <li>• Occupational injury and disease</li> <li>• Risk treatment procedures</li> <li>• Relevant awards and/or industrial agreements</li> <li>• Records of induction and training</li> </ul> |
|----------------------------------|--|

Records may be paper-based or computerised

Monitoring of tasks and systems may include:

- Review of written reports performance appraisal
- Auditing procedures
- Occupational health and safety/environmental systems and processes
- Evacuation procedures
- General duty of care requirements
- Provision of consultation and training

Performance measures may include:

- Performance of key people
- Overall productivity of employees
- Employee morale
- Work satisfaction
- Ratio of direct workers to those who support, supervise or manage them
- Ratio of sales dollars per employee

Managing diversity involves:

- valuing and utilising the different skills, backgrounds and capabilities of self and employees. It includes developing strategies to encourage and enable their effective integration into the business.
- Occupational health and safety involves application and management of relevant occupational health and safety legislation and codes of practice, particularly general duty of care requirements for the maintenance of records of occupational injury and disease, and provision of information and training.

Occupational Health and Safety policies and procedures may include:

- Providing a safe working environment
- Identifying and assessing workplace hazards and risks
- Controlling hazards and risks
- Providing adequate information and supervision
- Establishing a process for consultation as set out in legislation
- Establishing an Occupational Health and Safety/environmental training program
- Maintaining a system for Occupational Health and Safety/environmental records
- Promoting, maintaining and improving the system

Documents to be read may include:

- Occupational Health and Safety/Environmental legislation
- Organisation's policies and procedures
- Risk assessment procedures
- Budgets
- Financial projections

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

- Demonstrates a detailed knowledge of key people management concepts and practices
- Uses effective consultative processes with colleagues to achieve results
- Follows appropriate legal and statutory requirements and reporting obligations
- Manages the occupational health and safety/environmental systems and processes effectively
- Develops/promotes a safety conscious culture in the workplace
- Adapts to new situations using appropriate strategies (e.g. innovation, persistence, resourcefulness, and contingency planning)

**Interdependent assessment of units**

Co-assessment may occur with other relevant units.

**Resource implications**

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that human resources can be managed under a range of typical conditions.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects, workplace based assignments and other appropriate mechanisms which simulate a workplace environment.

**DRTNHB52A****Unit Descriptor****Employability Skills****Application of the Unit****Manage client services**

This unit is relevant to senior managers or an owner of a small business.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTNH22A
- **Links to other units:** None
- **Links outside this Training Package:** None

**Unit Sector**

Non-hydrocarbon

**ELEMENT****PERFORMANCE CRITERIA**

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|--|---|
| 1. Plan to meet client requirements.                           | 1.1 Research, understand and assess the needs of clients and include in the planning process.<br>1.2 Make provision in plans to achieve quality, time and cost specifications negotiated with clients.<br>1.3 Maintain effective communication links and consultative processes with clients.   |
| 2. Identify opportunities for product and service enhancement. | 2.1 Identify existing and/or potential customer base as a guide to establishing demand.<br>2.2 Identify service opportunities and promote to potential clients.<br>2.3 Determine client requirements and preferences in relation to services to be supplied as a basis for the marketing strategy.<br>2.4 Implement systems to receive, respond to and address client reactions.<br>2.5 Implement marketing strategies aimed at improving the business' competitive position. |
| 3. Explore opportunities to improve client satisfaction.       | 3.1 Deliver products and services to client satisfaction within quality, time, cost and resource parameters.<br>3.2 Maintain quality of products and services by establishing client feedback mechanisms.<br>3.3 Discuss problems and resolve where possible through agreed and accepted processes.<br>3.4 Investigate client complaints promptly and regard as an opportunity to improve service and act upon accordingly.   |



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|----------------------------------|---|
| 4. Monitor marketing performance | 4.1 Monitor achievement of performance targets regularly in accordance with the marketing plan.<br>4.2 Investigate causes of any serious performance deviations and take corrective action.<br>4.3 Monitor and optimise production operations.<br>4.4 Use resources effectively and efficiently to provide a quality service to clients.<br>4.5 Plan and introduce strategies which support the establishment of long term relationships with clients.<br>4.6 Adjust product and service delivery promptly and decisively to satisfy client and organisation requirements.<br>4.7 Manage records, reports and recommendations within the organisation's system and processes. |
|----------------------------------|---|

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Underpinning knowledge and skills:

- Legal rights and responsibilities
- Inspection/research techniques for collection of data
- Analysis and problem solving techniques
- Contractual rights and responsibilities
- Planning and control systems (sales, advertising and promotion, logistics)
- Key marketing concepts and methods
- Methods of monitoring client satisfaction
- Record keeping systems
- Communication systems, processes and procedures

## RANGE STATEMENT

Clients may be drawn from existing or new sources

Client services are provided within requirements established by:

- Consumer protection legislation
- Enterprise/client relations, policy and procedures

Various marketing strategies may include:

- Achieving lower costs through greater efficiency than competitors
- Pursuing cost leadership with a specialist market
- Promotion and advertising

Client satisfaction data may be obtained through:

- Survey/other feedback mechanisms
- Informal discussion
- Client meetings

Numerical calculations required may include:

- Basic arithmetical calculations - addition, subtraction, multiplication, division
- Place value for whole numbers and decimals
- Percentages
- Estimation (e.g. quantities/resources/time)
- Interpretation of statistical diagrams, including tables, charts and graphs

Calculations may be made by calculator

Resources may include:

- People
- Finance
- Information
- Equipment
- Power/energy
- Time
- Buildings/facilities
- Technology
- Computer software

Records may be paper-based or computerised

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

- Satisfies client needs for products and services within quality, time and cost parameters
- Uses effective consultative processes to achieve results
- Maintains effective communication with clients
- Manages services within budget constraints
- Monitors/introduces ways to improve services
- Seeks client feedback and acts on constructive advice
- Adapts to new situations using appropriate strategies (e.g. innovation, persistence, resourcefulness, and contingency planning)
- Uses legislation, codes and national standards relevant to the workplace

### Interdependent assessment of units

Co-assessment may occur with other relevant units.

### Resource implications

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that business operations can be managed under a range of typical conditions.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects, workplace based assignments and other appropriate mechanisms which simulate a workplace environment.

## DRTNHB53A

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Manage non-routine, complex situations

This unit is relevant to senior managers or an owner of a small business.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTNH23A
- **Links to other units:** None
- **Links outside this Training Package:** None

#### Unit Sector

Non-hydrocarbon

#### ELEMENT

#### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1. Collect and analyse information.                        | 1.1 Anticipate problems by constantly monitoring and analysing all available information.<br>1.2 Assess information for relevance and applicability.<br>1.3 Assess other sources of information to assist in problem solving, if available and if required   |
| 2. Manage non-routine, complex operations/procedures.      | 2.1 Apply a depth and breadth of knowledge and experience to manage all operations/procedures.<br>2.2 Take creative and responsive approaches to resource management to appropriately meet requirements of the operation/procedure.<br>2.3 Take responsibility for decision making processes on the job.<br>2.4 Take appropriate and timely actions in response to unusual or changing situations.<br>2.5 Adapt behaviour to the needs of the situation to achieve planned outputs and outcomes                              |
| 3. Manage emerging challenges and opportunities.           | 3.1 Take opportunities to make adjustments in response to changing needs of clients and the organisation.<br>3.2 Help individuals and teams to handle change efficiently and effectively.<br>3.3 Respond to new situations promptly by identifying critical information/issues and developing appropriate strategies.  |
| 4. Develop creative and flexible approaches and solutions. | 4.1 Identify and analyse alternative approaches to managing workplace issues and problems.<br>4.2 Determine a range of possible solutions from extensive knowledge and experience.<br>4.3 Analyse problems for any long term impact and assess potential solutions.<br>4.4 Assess risks and take action to achieve a recognised benefit or advantage to the organisation.<br>4.5 Monitor effectiveness of action.<br>4.6 Manage the workplace in a way which promotes the development of innovative approaches and outcomes. |

**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

Underpinning knowledge and skills:

- Communication systems, processes and procedures
- High level mathematical skills
- Problem solving techniques and decision making
- Extensive operational knowledge
- Legislation, codes and national standards relevant to the workplace
- Organisation's goals, objectives, plans, systems and processes
- Operational factors relating to business
- Control systems
- Methods of monitoring performance
- Records systems

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Managers will normally be engaged in a workplace context in which they:

- Are autonomous, maybe working under broad guidance
- May supervise others
- May guide teams
- May have responsibility for planning and managing the work of others
- Will be involved in self directed application of knowledge
- Have a substantial depth of knowledge and skills in a range of roles and functions
- Operate in varied or highly specific contexts
- Have technical knowledge

Managers normally operate in diverse and complex workplace environments in which they use:

- Goals, objectives, plans, systems and processes
- Business and performance plans
- Quality and continuous improvement processes and standards
- Resources

Non-routine and complex situations may include:

- Emergency response
- Conflict resolution
- Industrial relations issues
- Effects of legal ramifications of incidents (e.g. accident)
- Effects of complex technical problems

A range of learning opportunities may be used, for example:

- Mentoring
- Coaching
- Structured training programs
- Distance learning

Resources may include:

- People
- Finance
- Equipment
- Power/energy
- Buildings/facilities
- Technology
- Information
- Time
- Reports and records management systems

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that the individual has the ability to apply the following skills to more difficult situations than experienced in lower level competency applications:

- Problem solving and decision making techniques
- Ability to prepare reports on complex data within specified time frames
- Ability to respond effectively to challenging situations as they arise
- Ability to develop appropriate strategies and plans
- High level mathematical skills
- Use of effective consultation processes
- The ability to transfer the competency to changing circumstances
- The use of legislation, codes and national standards relevant to the workplace

### Interdependent assessment of units

Co-assessment may occur with other relevant units.

### Resource implications

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

Where assessment is not to be totally based on workplace evidence, there will need to be a data base of complex situations which have occurred in the drilling industry around the world from which realistic assessment scenarios can be developed.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that a range of non-routine, complex situations can be managed.

Part of this evidence should be obtained by an analysis of the approach taken to any individual non-routine complex situation.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects and other appropriate mechanisms, which simulate a workplace environment. These projects should be based on past examples of appropriate non-routine complex situations and may either be taken directly from one or more of these examples (where they are unknown to the assessee) or adapted from such examples.

**DRTOG01B****Assist with the health and safety of the working environment****Unit Descriptor**

This unit covers the assistance with the health and safety of the working environment by a leasehand/roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON01A, DRTOGOF01
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Conform to legislative and general health and safety requirements. | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>1.3 Use safety equipment as required by legislative and operational requirements.<br>1.4 Adhere to agreed procedures regarding personal health and safety and the health and safety of others.<br>1.5 Follow agreed procedures in the event of fire, accident and other emergency.<br>1.6 Adhere to organisational requirements regarding conduct in the workplace.<br>1.7 Report all incidents in line with enterprise requirements. |
| 2. Monitor and maintain pollution control measures.                   | 2.1 Control discharges from the area within the functional responsibility to be within prescribed limits.<br>2.2 Identify and report unplanned discharges according to operational requirements.<br>2.3 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>2.4 Adhere to agreed procedures as required by legislative requirements and working practices.<br>2.5 Identify materials for disposal accurately, and comply with disposal procedures.<br>2.6 Report all incidents.  |



- |  |   |
|--|---|
| 3. Monitor and maintain the health and safety of the individual, other workers and visitors. | 3.1 Maintain area within functional responsibility clean and free of hazards.<br>3.2 Check required safety equipment and machine guards are safely and securely in position and used.<br>3.3 Identify and report unsafe equipment and dangerous occurrences according to operational requirements.<br>3.4 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>3.5 Handle materials safely in accordance with legislative and operational requirements.<br>3.6 Handle, operate and store tools and equipment safely and securely.<br>3.7 Comply with storage requirements for incompatible substances.<br>3.8 Report incidents/accidents in accordance with site/company procedures. |
|--|---|

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

#### **Required skills:**

- Use and care of personal protective equipment
- Apply safe lifting and handling techniques
- Implement workplace reporting procedures
- Source interpret and apply safety information (e.g. MSDS sheets)

#### **Required knowledge:**

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Evacuation and fire procedures
- Workplace safety policy
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Safe working practices for heights
- Safe work practices (e.g. working over water, onshore/offshore technology)
- Housekeeping/fire prevention procedures
- Confined space and tank entry
- Permit to work
- Job skills analysis and hazard identification
- Hazardous materials/chemical handling
- Chain of command and responsibilities

## RANGE STATEMENT

This unit covers the role of an onshore leasehand/offshore roustabout in contributing to the health and safety of the working environment.

Briefings/handover details may include:

- Toolbox safety meeting
- Task specific - Job Safety Analysis (JSA)
- Pre-tour safety meeting
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- State Occupational Health and Safety Acts and Regulations
- Codes of practice
- Commonwealth Legislation
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Duty of care
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Hand signals
- Public address system
- Written work instructions

Written tasks may include:

- Note taking for-
  - pre-tour safety meetings
  - weekly safety meetings
  - stop for safety meetings

Reading material may include:

- Job Safety Analysis (JSA)
- Safety/FirstAid manuals
- Chemical labels

Weather conditions may include:

- Extreme heat
- Extreme cold
- Wet weather - muddy/slippery conditions
- Dust storms
- High winds/cyclone
- Day/night
- 24 hour operation

Pollution control measures relate to:

- Spills
- Leaks

Safety equipment includes:

- Fire protection
- First Aid
- Survival

Discharges may include:

- Liquids
- Gases
- Solids

Materials may include:

- Flammable
- Toxic
- Corrosive
- Explosive
- Radioactive

Personal protective equipment may include:

- Eye protection
- Hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration toxic substances (e.g. H 2S)
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Work as part of a team
- Work independently with some supervision
- Follow direction and work in a safe manner
- Emergency duties/procedures
- Safety rules and procedures
- Permit to work system
- Housekeeping
- Fire prevention

**Interdependent  
assessment of units**

Literacy and numeracy initially to assess ability of employee to complete training levels:

- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance

and as relevant:

- DRTOGON06B Carry out rig lease operations
- DRTOGON07B Move loads
- DRTOGOF05A Carry out deck operations
- DRTOGOF06A Handle and store cargo
- DRTOGOF07A Assist in the transfer of passengers and freight during helicopter operations

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG02B****Assist in maintaining rig safety and emergency procedures****Unit Descriptor**

This unit covers the assistance provided to control emergencies, critical situations and the maintenance of rig safety by a leasehand/roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON02A, DRTOGON03A, DRTOGOF02A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Assist with the control of critical situations.                             | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Identify developing, emerging and existing critical situations and take actions appropriate to the situation.<br>1.3 Report any hazards/potential hazards observed immediately.<br>1.4 Activate relevant alarms in accordance with operational requirements.<br>1.5 Take actions to control and alleviate the situation in accordance with operational and legislative requirements.<br>1.6 Monitor the situation and take relevant actions to minimise risks to personnel, environment, process, plant and equipment.<br>1.7 Maintain reporting requirements in the event of a critical situation in accordance with safety management systems. |
| 2. Assist in securing rig for cyclones, rig moves or emergencies, as directed. | 2.1 Identify, analyse, clarify and confirm communication requirement and act on in accordance with company policies and procedures.<br>2.2 Access, interpret, apply and maintain communication and information systems in a current and accurate state.   |
| 3. Participate in fire drills.   | 3.1 Recognise, activate and comply with fire alarm signals.<br>3.2 Obtain and wear emergency personal protection equipment (including breathing apparatus and fearnought suit) as appropriate.<br>3.3 Operate fire fighting equipment (portable extinguishers and fire hoses and nozzles) according to manufacturer's and site procedures.<br>3.4 Identify and comply with fire team responsibilities and assigned fire station.<br>3.5 Apply boundary cooling procedures and emergency ventilation shutdown procedures.<br>3.6 Follow emergency muster and evacuation procedures if required.  |

- |   |   |
|---|---|
| 4. Demonstrate safe working procedures. | 4.1 Obtain and wear personal protective equipment, appropriate to task.<br>4.2 Set and pull manual slips correctly.<br>4.3 Operate make-up and break-out manual tongs correctly.<br>4.4 Move drill floor drilling tools and equipment in accordance with company and statutory safe operating procedures. |
|---|---|

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Set and pull manual slips
- Operate manual make-up tongs
- Operate manual break-out tongs
- Operate portable extinguishing equipment
- Move drills, tools and equipment around drill floor
- Wear correct protective clothing for the execution of duties and tasks
- Assist in the risk assessment of a manual handling task
- Demonstrate correct manual handling technique
- Correctly apply and use the permit to work and lock out procedure
- Act as chairman of safety meeting
- Report regularly to derrickman on equipment condition
- Activate alarms
- Make announcement on the public address system (PA)
- Proceed to muster point
- Don emergency gear (e.g. fire suit, life jacket)
- Operate specific pieces of fire fighting, life saving and emergency equipment
- Follow instructions
- Determine wind direction
- Assist carrying injured person in stretcher

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Emergency procedures
- Permit to work system
- BOP, gas and fire alarm signals
- Assigned fire station
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Rig emergency procedures as per station drill
- Emergency duties
- Location of alarm stations
- Identify alarm signals
- Life raft launching procedure (where appropriate)
- Fire team procedures
- Fire, emergency and lifesaving equipment appropriate to the incident
- Survival craft boarding procedures (where appropriate)
- Location of muster points
- Means of evacuation

## RANGE STATEMENT

This unit covers the role of a leasehand/roustabout in maintaining rig safety and in contributing to the control of emergencies and critical situations.

Briefings/handover details may include:

- Toolbox safety meeting
- Task specific - Job Safety Analysis (JSA)
- Pre-tour safety meeting
- Post drill critique
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client
- Permit to work
- Work inspection
- Location of potential hazards
- PTW system

Statutory adherence may include:

- State Occupational Health and Safety Acts and Regulations
- Codes of practice
- Commonwealth Legislation
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (as relevant)
- Duty of care
- Environmental
- Station Bill (international requirement)
- Petroleum regulations

Personal protective equipment may include:

- Safety helmet
- Safety footwear
- Safety glasses
- Gloves
- Riding belt
- Safety belt
- Life vest
- Safety goggles
- H 2S equipment
- Respirators

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Hand signals
- Special signals for use with lifeline
- Public address system
- Written work instructions

Weather conditions may include:

- Extreme heat
- Extreme cold
- Wet weather - muddy conditions
- Dust storms
- High winds/cyclone
- Day/night

Alarms may include:

- Audible
- Warning gestures
- Oral warnings
- Fixed system specific to installation

Critical /emergency situations may include:

- Operational difficulties, equipment/systems failure
- Extreme weather, poor visibility
- Equipment failure
- Leaks
- Kicks
- Gas and collision
- Escape and evacuation
- Man-overboard (where relevant)
- Helicopter emergency
- Oil
- General emergency
- Communications failure
- Blocked escape routes
- Loss of chain of command
- Loss of structural integrity
- Loss of stability
- Vessel movement (where relevant)
- Fire/smoke/explosions
- Injured personnel
- Well control

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances (e.g. H 2S)
- Continuous communication maintained
- Reacting to on-site emergencies
- Risk assessment/Job Safety Analysis (JSA)

Information formats may include:

- Oral
- Telephone
- Public address system
- Radio
- Hand signals



Reporting/records requirements may include:	<ul style="list-style-type: none"><li>• Oral</li><li>• Written</li><li>• Hazard observation reports</li><li>• Rig safety audits</li></ul>
Safety management systems may include:	<ul style="list-style-type: none"><li>• Organisational</li><li>• Installation</li></ul>
Relevant actions taken to control and alleviate critical situations may include:	<ul style="list-style-type: none"><li>• Make safe</li><li>• Isolate</li><li>• Shutdown</li><li>• Evacuate work area</li><li>• Report</li><li>• Record</li><li>• Contain</li><li>• Rectify</li><li>• Proceed to muster point</li><li>• Follow instructions</li><li>• Prevent escalation</li><li>• Make safe</li></ul>
Critical aspects may include:	<ul style="list-style-type: none"><li>• Initiate alarms</li><li>• Identify alarm signals</li><li>• Proceed to correct muster station</li><li>• Act as fire/emergency team member</li><li>• Follow instructions</li></ul>
Reading materials may include:	<ul style="list-style-type: none"><li>• Job Safety Analysis (JSA)</li><li>• Manufacturers' instructions</li><li>• Training materials</li><li>• Emergency response bulletins</li></ul>
Safety equipment includes:	<ul style="list-style-type: none"><li>• Fire protection</li><li>• First Aid</li><li>• Survival</li></ul>
Spillages may be:	<ul style="list-style-type: none"><li>• Flammable</li><li>• Toxic</li><li>• Pollution</li></ul>
Discharges may include:	<ul style="list-style-type: none"><li>• Liquids</li><li>• Gases</li><li>• Solids</li></ul>

- Materials may include:
- Flammable
  - Toxic
  - Corrosive
  - Explosive
  - Radioactive

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Rig emergency procedures
- Rig layout and muster points
- Alarm systems
- Evacuation procedures
- Working practices
- Information format
- Relevant actions
- Critical situations

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance

and as relevant:

- DRTOGON06B Carry out rig lease operations
- DRTOGON07B Move loads
- DRTOGOF05B Carry out deck operations
- DRTOGOF06B Handle and store cargo
- DRTOGOF07B Contribute to the transfer of passengers and freight during helicopter operations

### Context of assessment

This unit will be assessed using a suitable simulation or if appropriate on an operational rig.

### Resource implications

Access is required to appropriate simulations or an operational rig.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG03B****Assist in establishing and maintaining effective working relationships****Unit Descriptor**

This unit covers the assistance provided in establishing and maintaining effective working relationships by a leasehand/roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON04A, DRTOGOF03A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Establish and maintain effective working relationships with colleagues.        | 1.1 Treat colleagues in a manner which promotes and maintains goodwill.<br>1.2 Meet reasonable requests from colleagues promptly and willingly.<br>1.3 Provide essential information relating to daily work schedules clearly, accurately and promptly.<br>1.4 Offer or seek appropriate support where colleagues appear to be in work related difficulties.<br>1.5 Take prompt reporting action where a breakdown in working relationships cannot be resolved, with an appropriate authority. |
| 2. Establish and maintain effective communications with colleagues.               | 2.1 Give communications clearly, concisely and accurately and deliver in a style appropriate to the workplace.<br>2.2 Receive and act on communications promptly in accordance with operational requirements.<br>2.3 Identify difficulties in interpreting communications and seek prompt clarification.<br>2.4 Use language and terminology appropriate to the workplace and the situation.   |
| 3. Establish and maintain relationships with visitors to the working environment. | 3.1 Greet visitors in a manner which provides goodwill in accordance with operational requirements.<br>3.2 Provide visitors with sufficient information to meet their identified need.<br>3.3 Provide information requested clearly in a manner which facilitates understanding.<br>3.4 Pass on information requests outside of the functional responsibility to an appropriate person promptly.<br>3.5 Ensure visitors are not endangered in any way by acts or omissions of the individual.  |

4. Carry out work handovers.
- 4.1 Record relevant information accurately and legibly in accordance with operational requirements.
  - 4.2 Relay/receive current operational status to/from relevant personnel accurately and completely.
  - 4.3 Relay operating instructions accurately and completely to relevant personnel.
  - 4.4 Leave work area clean and hazard free in accordance with operational requirements.

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Obtain and implement operational policies, procedures, instructions, codes of practice, standards and schedules
- Pass on information accurately and completely and clarify information received
- Control/minimise risks of work area hazards

### Required knowledge:

- Company and statutory guidelines, procedures and practices
- Workplace reporting procedures
- Permit to work system
- Emergency procedures
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a leasehand/roustabout in establishing and maintaining effective working relationships.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards
- Review of Job Safety Analysis (JSA)
- Pre-tour safety meetings
- Communication
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety Acts and Regulations
- Petroleum regulations
- Codes of practice
- Australian Standards
- Environmental regulations
- Company policies and procedures
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Duty of care
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Hand signals
- Verbal
- Public address system
- Written work instructions

Weather conditions may include:

- Sun, rain, wind, storms
- Hot and cold
- Calm to severe weather conditions
- 24 hour operation

Visitors include:

- Approved and authorised visitors
- Third parties

Colleagues include:

- Co-workers
- Supervisors
- Managers
- Other company employees
- Third parties

Information may include:

- Oral
- Written
- Visual
- Safety
- Operational
- Statutory

Situations may include:

- Informal meeting
- Formal meeting
- Normal work situation
- Team briefings
- Contingency situation
- Tool box meetings

Work handovers may include:

- To next shift
- To next job
- To next person
- From previous shift
- From previous job
- From previous person

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Briefings/handovers
- Situation
- Read, interpret and apply statutory guidelines, procedures and practices
- Communication techniques appropriate to worksite

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG04B Carry out equipment and basic rig maintenance

and where appropriate:

- DRTOGON06B Carry out rig lease operations
- DRTOGON07B Move loads
- DRTOGOF05B Carry out deck operations
- DRTOGOF06B Handle and store cargo
- DRTOGOF07B Contribute to the transfer of passengers and freight during helicopter operations

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG04B****Carry out equipment and basic rig maintenance****Unit Descriptor**

This unit covers the maintenance of equipment and rig (and where relevant hull) by a leasehand/roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON05A, DRTOGOF04A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Plan and prepare for operations.                       | 1.1 Conform to safe working practices and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational requirements.<br>1.5 Confirm availability of necessary auxiliary equipment in accordance with operational requirements.   |
| 2. Prepare and paint metal surface.                       | 2.1 Identify, rectify and/or record/report potential hazards.<br>2.2 Identify, locate and apply personal protective equipment.<br>2.3 Prepare surface using correct equipment.<br>2.4 Apply rust remover, rust converter and undercoat in accordance with manufacturer's specifications.<br>2.5 Mix epoxy, paracryl or other paints in correct proportions in accordance with manufacturer's specifications.<br>2.6 Mask and protect equipment against overspray, where necessary.<br>2.7 Apply finishing coat using brush, roller and spray gun.<br>2.8 Clean equipment in accordance with site requirements. |
| 3. Assist in maintenance of materials handling equipment. | 3.1 Identify faults/potential faults and report immediately.<br>3.2 Identify, record and/or report requirement for repair or maintenance.<br>3.3 Perform periodical maintenance on chains blocks and come alongs (where fitted), ensuring equipment is corrosion free, lubricated and operating freely.<br>3.4 Conduct periodical examination of hooks, shackles, slings and strops for defects, correct marking of SWL and ease of operation.<br>3.5 Maintain equipment as directed and in accordance with company and/or manufacturer's specifications.  |



- 4. Prepare and use solvent solutions and rig wash to clean and maintain work areas in non-slippery condition.
  - 4.1 Use protective clothing and equipment correctly during handling of solvents.
  - 4.2 Apply approved instructions and Occupational Health and Safety requirements on the use of hazardous chemicals for cleaning.
  - 4.3 Isolate area being washed or provide warning signs to indicate slippery decks.
  - 4.4 Prepare and apply solvent solutions and rig wash in accordance with company and/or manufacturers' specifications to maintain work areas in non-slippery conditions.
  - 4.5 Clean equipment correctly and stow on completion.
  - 4.6 Clean, preserve and reassess painting equipment in accordance with manufacturers' recommendations.

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Report regularly to and work as directed by the driller/derrickman in a timely and efficient manner.
- Assemble rust scaling equipment
- Fit safety pins, where applicable
- Wear appropriate protective clothing and equipment
- Apply rust treatment undercoat/final coat correctly
- Clean and preserve equipment on completion
- Conduct pre-operating checks on forklift
- Conduct periodic maintenance on chain blocks, comealongs and crane hoists
- Examine hooks, shackles, slings, straps and baskets
- Keep work area clean
- Work within the company safety guidelines, procedures and practices
- Use safe operational practices when handling equipment
- Report regularly to the crane operator on equipment condition
- Assemble surface preparation equipment correctly
- Ensure safety pins are in air hose fittings
- Wear appropriate protective clothing/equipment
- Prepare and paint surfaces
- Check, identify and report defects on rigging equipment
- Clean decks correctly
- Report immediately any malfunction or equipment failure
- Work as directed by the crane operator

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Maintenance procedures
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Company equipment maintenance procedures
- Surface preparation equipment
- Safety pins and air hose fittings
- Safe operating procedures and practices
- Paint types and applications
- Rust treatment
- Equipment cleaning and preservation techniques
- Chain blocks, comealongs and crane hoist maintenance procedures
- Deck cleaning procedures

## RANGE STATEMENT

This unit covers the role of a leasehand/roustabout in maintaining equipment and rig.

Briefings/handover details may include:

- Work inspections
- Location of potential hazards
- Completion of maintenance records
- Colour coding for slings and ropes
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- Safe working practices
- Plant and equipment regulations
- Occupational Health and Safety Acts and Regulations
- Australian Standards
- Maintenance procedures
- Policies and procedures
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Duty of Care
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Verbal
- Hand signals
- Telephone
- Public address system
- Written work instructions

Data to be reviewed for specific information may include:

- Operator's manuals
- Manufacturers' specifications for paint, rust remover, rust converter
- Materials Safety Data Sheets (MSDS)
- Chemical labels

Maintenance/periodical maintenance may include:

- Crane hoists
- Chains
- Blocks
- Comealongs

Periodical maintenance examination may include:

- Hooks
- Shackles
- Slicks
- Strops

Weather conditions may include:

- Day/night
- Hot/cold
- Wet/dry
- Storms - dust, lightning

Personal protective equipment includes:

- Gloves
- Goggles - sealed protective eyewear
- Breathing apparatus
- Hearing protection
- Correct footwear

Equipment may include:

- Hand chipping and scaling equipment
- Pneumatic or electric wire buffing equipment
- Hand wire brush
- Paint and spraying compressor

Reading tasks may include:

- Work schedules
- Manufacturers' instructions
- Materials Safety Data Sheets (MSDS)

Numerical tasks may include:

- Measurement
- Mass
- Load dimensions
- Safety working load calculations

Surface preparation may include removing rust using:

- Pneumatic chipping and scaling equipment
- Hand chipping and scaling equipment
- Pneumatic or electric wire buffing equipment
- Hand wire brush

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Identify and select maintenance tools and equipment
- Prepare rig surfaces for painting
- Briefings/handovers
- Statutory adherence
- Communications

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships

and where appropriate:

- DRTOGON06B Carry out rig lease operations
- DRTOGON07B Move loads

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG08B****Contribute to the health and safety of the working environment****Unit Descriptor**

This unit covers the contribution to the health and safety of the working environment by a floorman.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON08A, DRTOF08A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Conform to legislative and general health and safety requirements. | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>1.3 Use safety equipment as required by legislative and operational requirements.<br>1.4 Adhere to agreed procedures regarding personal health and safety and the health and safety of others.<br>1.5 Follow agreed procedures in the event of fire, accident and other emergency.<br>1.6 Adher to organisational requirements regarding conduct in the workplace.<br>1.7 Report all incidents.   |
| 2. Monitor and maintain pollution control measures.                   | 2.1 Control discharges from the area within the functional responsibility and within prescribed limits.<br>2.2 Comply with storage requirements for incompatible substances.<br>2.3 Report incidents/accidents in accordance with site/company procedures.<br>2.4 Identify unplanned discharges and report according to operational requirements<br>2.5 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>2.6 Adhere to agreed procedures as required by legislative requirements and working practices<br>2.7 Identify materials for disposal accurately, and appropriately package, label and transfer to the responsible person for disposal. |

- |  |   |
|--|---|
| 3. Monitor and maintain the health and safety of the individual, other workers and visitors. | 3.1 Keep area within functional responsibility clean and free of hazards.<br>3.2 Ensure required safety equipment and machine guards are safely and securely in position and used.<br>3.3 Identify unsafe equipment and dangerous occurrences and report according to operational requirements.<br>3.4 Select and use relevant personal protective equipment in accordance with current legislative and operational requirements.<br>3.5 Handle materials safely in accordance with legislative and operational requirements.<br>3.6 Handle, operate and store tools and equipment safely and securely.<br>3.7 Monitor health and safety and identify, rectify and report non-conformances/incidents. |
|--|---|

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Use and care of personal protective equipment
- Apply safe lifting and handling techniques
- Implement workplace reporting procedures
- Source safety information

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Evacuation and fire procedures
- Workplace safety policy
- Workplace reporting procedures
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a floorman in contributing to the health and safety of the working environment.

Briefings/handover details may include:

- Participate in pre-tour safety meetings
- Toolbox safety meetings
- Safety briefing/induction
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:	<ul style="list-style-type: none"><li>• Occupational Health and Safety</li><li>• Duty of care</li><li>• Environment</li><li>• Australian Standards</li><li>• (PSLA) Petroleum Submerged Lands Act (where appropriate)</li><li>• Petroleum regulations</li></ul>
Communications may include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Oral instruction</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li></ul>
Written tasks may include note taking for:	<ul style="list-style-type: none"><li>• Pre-tour safety meetings</li><li>• Weekly safety meetings</li><li>• Stop for safety meetings</li></ul>
Reading tasks may include:	<ul style="list-style-type: none"><li>• Job Safety Analysis (JSA)</li><li>• Safety/FirstAid manuals</li><li>• Chemical labels</li></ul>
Weather conditions may include:	<ul style="list-style-type: none"><li>• Day/night</li><li>• Dry/wet</li><li>• Hot/cold</li><li>• Storms - lightning, dust storms, wind</li></ul>
Safety equipment includes:	<ul style="list-style-type: none"><li>• Fire protection</li><li>• First Aid</li><li>• Survival</li></ul>
Discharges may include:	<ul style="list-style-type: none"><li>• Liquids</li><li>• Gases</li><li>• Solids</li></ul>
Materials may include:	<ul style="list-style-type: none"><li>• Flammable</li><li>• Toxic</li><li>• Corrosive</li><li>• Explosive</li><li>• Radioactive</li></ul>
Personal protective equipment may include:	<ul style="list-style-type: none"><li>• Eye protection</li><li>• Hearing protection</li><li>• Gloves</li><li>• Footwear</li><li>• Hard hats</li><li>• Respirators</li></ul>



Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration toxic substances (e.g. H 2S)
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Understand and comply with safety policies and procedures
- Comply with requirements of using personal protective equipment
- Report all occurrences and hazards
- Emergency duties and procedures
- Safety rules and procedures
- Permit to work system
- Fire prevention

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Establish and maintain effective working relationships
- DRTOG11B Prepare and operate drilling fluid systems
- DRTOG12B Perform rig floor operations

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG09B****Contribute to the control of emergencies and critical situations****Unit Descriptor**

This unit covers the contribution to control of emergencies and critical situations by a floorman.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON09A, and that part of DRTOGOF09 which was common to DRTOGON09A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Contribute to the control of critical situations. | 1.1 Conform to safe working practices current legislative and operational requirements.<br>1.2 Identify developing, emerging and existing critical situations and take actions appropriate to the situation.<br>1.3 Activate relevant alarms in accordance with operational requirements.<br>1.4 Identify, interpret and apply duties of floorman and drill floor crew in quickly and competently closing the well.<br>1.5 Identify, interpret and apply well kick signs.<br>1.6 Locate full opening safety valve, BOP and flow control head.<br>1.7 Give assistance in first aid and medivac procedures as detailed in company policy and procedure manual.<br>1.8 Take actions to control and alleviate the situation in accordance with operational and legislative requirements.<br>1.9 Monitor the situation and take relevant actions to minimise risks to personnel, environment, process, plant and equipment.<br>1.10 Maintain reporting requirements in the event of a critical situation in accordance with safety management systems. |
| 2. Respond to emergencies in other areas.            | 2.1 Conform to safe working practices and current legislative and operational requirements.<br>2.2 Identify developing, emerging and existing critical situations and take actions appropriate to the situation.<br>2.3 Activate relevant alarms in accordance with operational requirements.<br>2.4 Give clear, accurate information in relation to the emergency in a suitable format for the needs of relevant personnel.<br>2.5 Adhere to agreed emergency procedures in accordance with operational requirements.<br>2.6 Take immediate action to make the situation safe, minimise risks to personnel, environment, process, plant and equipment.   |

- |   |   |
|---|---|
| 3. Comply with rig safety procedures.         | 3.1 Obtain and wear personal protective equipment, appropriate to task.<br>3.2 Assist as directed in hang-off procedures and securing for severe weather in accordance with rig procedures.<br>3.3 Read, interpret and apply signals and safe working procedures for operation of man riding and air hoists.<br>3.4 Obtain lift authorisation.<br>3.5 Inspect riding harness and hoist.<br>3.6 Read, interpret and apply signalman's duties.<br>3.7 Read, interpret and apply lock-out and tagging procedures as detailed in company policy and procedural documents.<br>3.8 Read, interpret and apply permit to work system as detailed in company policy and procedural documents.<br>3.9 Attend and participate in pit drills and safety meetings. |
| 4. Participate in fire drills.                | 4.1 Recognise and comply with fire alarm signals.<br>4.2 Operate portable extinguishing equipment, fire hose, nozzles and breathing apparatus in accordance with manufacturers' and/or company procedures.<br>4.3 Identify and comply with fire team responsibilities.<br>4.4 Obtain and wear fire resistant clothing where available.<br>4.5 Read, interpret and apply boundary cooling procedures and emergency ventilation shutdown.<br>4.6 Identify assigned fire/boat station and follow procedures.   |
| 5. Demonstrate safe working procedures.       | 5.1 Set and pull manual slips correctly.<br>5.2 Operate make-up and break-out manual tongs correctly.<br>5.3 Move drill floor drilling tools and equipment in accordance with company and statutory safe operating procedures.  |
| 6. Assist in manual handling risk assessment. | 6.1 Interpret/apply national standards and code of practice for manual handling.<br>6.2 Apply correct manual handling techniques when lifting pushing, pulling, carrying or restraining animate or inanimate objects.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Implement personal protection requirements appropriate to the environment
- Recognise effects of changes of ambient conditions on operations
- Locate sources of information and interpret drawings and manuals
- Operate equipment
- Set and pull manual slips
- Operate manual make-up tongs
- Operate manual break-out tongs
- Move drills, tools and equipment around drill floor
- Wear correct protective clothing for the execution of duties and tasks
- Assist in the risk assessment of a manual handling task
- Demonstrate correct manual handling techniques
- Act as chair of safety meeting

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Emergency procedures
- Fire and gas control system
- Permit to work system
- Well kicks
- Operation of full-opening safety valve, and inside BOP
- Manual duties of each rig crew member during a well kick drill
- Emergency shutdown control system
- Effects of loss of any utility and its reinstatement
- Functioning of process control, including instrumentation
- Equipment layout and its connection with other systems
- Lockout/tag out operations
- Rig audit
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a floorman in contributing to the control of emergencies and critical situations.

Briefings/handover details may include:

- Participate in pre-tour safety meetings
- Review hazard control procedures (e.g. JSA)
- Follow safe operating procedures
- Assist as required and trained
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Australian Standards
- Well control
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Personal protective equipment may include:

- Safety helmet
- Safety footwear
- Safety glasses
- Gloves
- Riding belt
- Safety belt
- Life vest
- Safety goggles
- H 2S equipment

Communications may include:

- Two-way radio
- Oral instructions
- Hand signals
- Telephone
- Public address system
- Written work instructions

Weather conditions may include:

- Day/night
- Dry/wet
- Hot/cold
- Storms/lightning - dust storms/wind

Alarms may include, but are not limited to:

- Audible
- Warning gestures
- Oral warnings
- Fixed system specific to installation

Critical situations may include, but are not limited to:

- Operational difficulties
- Extreme weather
- Equipment failure
- Leaks
- Fires
- Kicks

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances (e.g. H 2S)
- Continuous communication maintained
- Reacting to on-site emergencies

Information formats may include, but are not limited to:

- Oral
- Telephone
- Public address system
- Radio
- Hand signals

Reporting requirements may include, but are not limited to:

- Oral
- Written

Safety management systems may include, but are not limited to:

- Organisational
- Installation

Relevant actions taken to control and alleviate critical situations may include, but are not limited to:

- Make safe
- Isolate
- Shutdown
- Evacuate work area
- Report
- Record
- Contain
- Rectify

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Follow safe work practice and procedures
- Function effectively in a team environment
- Understand emergency response plan
- Rig and emergency procedures
- Occupational Health and Safety guidelines
- Rig layout and muster points
- Evacuation procedures

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG08B Contribute to the health and safety of the working environment
- DRTOG10B Establish and maintain effective working relationships
- DRTOG11B Prepare and operate drilling fluid systems
- DRTOG12B Perform rig floor operations

**Context of assessment**

This unit will be assessed using a suitable simulation, or if appropriate, on an operational rig.

**Resource implications**

Access is required to appropriate simulations or an operational rig.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG10B****Establish and maintain effective working relationships****Unit Descriptor**

This unit covers the establishment and maintenance of effective relationships by a floorman.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON10A, DRTOFOF10A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Establish and maintain effective working relationships with colleagues.        | 1.1 Treat colleagues in a manner which promotes and maintains goodwill.<br>1.2 Meet reasonable requests from colleagues promptly and willingly.<br>1.3 Provide essential information relating to daily work schedules clearly, accurately and promptly.<br>1.4 Offer or seek appropriate support where colleagues appear to be in work related difficulties.<br>1.5 Take prompt reporting action with an appropriate authority where a breakdown in working relationships cannot be resolved. |
| 2. Establish and maintain relationships with visitors to the working environment. | 2.1 Greet visitors in a manner which provides goodwill in accordance with operational requirements.<br>2.2 Provide visitors with sufficient information to meet their identified need.<br>2.3 Provide information requested clearly in a manner which facilitates understanding.<br>2.4 Pass on information requests outside of the functional responsibility to an appropriate person promptly.<br>2.5 Ensure visitors are not endangered in any way by acts or omissions of the individual. |
| 3. Establish and maintain effective communications with colleagues.               | 3.1 Deliver clear, concise and accurate communications in a style appropriate to the workplace.<br>3.2 Act on communications received promptly in accordance with operational requirements.<br>3.3 Identify difficulties in interpreting communications and seek prompt clarification.<br>3.4 Use language and terminology appropriate to the workplace and the situation.  |



4. Carry out work handovers.
- 4.1 Record relevant information accurately and legibly in accordance with operational requirements.
  - 4.2 Relay to and receive from relevant personnel, accurate, complete and current operational status.
  - 4.3 Relay operating instructions accurately and completely to relevant personnel.
  - 4.4 Leave work area clean and hazard free in accordance with operational requirements.

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Obtain and implement operational policies, procedures, instructions, codes of practice, standards and schedules
- Pass on information accurately and completely and clarify information received
- Control/minimise risks of work area hazards

### Required knowledge:

- Company and statutory guidelines, procedures and practices
- Workplace reporting procedures
- Permit to work system
- Emergency procedures
- Workplace practices relating to visitors
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Rig/job technology

## RANGE STATEMENT

This unit covers the role of a floorman in establishing and maintaining effective working relationships.

Briefings/handover details may include:

- Pre-tour safety meeting
- Communication with co-workers
- Workplace inspection
- Teamwork
- Review Job Safety Analysis (JSA)
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety Acts and Regulations
- Duty of care
- Codes of practice
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (as relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Hand signals
- Telephone
- Public address system
- Written work instructions

Weather conditions may include:

- Day/night
- Dry/wet
- Hot/cold
- Storms/lightning - dust storms/wind

Visitors include:

- Approved and authorised visitors
- Third parties

Colleagues include:

- Co-workers
- Supervisors
- Managers
- Other company employees
- Third parties

Information may include:

- Oral
- Written
- Visual
- Safety
- Operational
- Statutory

Situations may include:

- Informal meeting
- Form meeting
- Normal work situation
- Team briefings
- Contingency situation

Work handovers may include:

- To next shift
- To next job
- To next person
- From previous shift
- From previous job
- From previous person

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Work in a team environment
- Follow direction from supervisor
- Comply with Occupational Health and Safety standards
- Communicate effectively according to site requirements
- Meet job responsibilities
- Company and statutory guidelines, procedures and practices
- Maintain visitor safety
- Conduct handovers

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit.

- DRTOG08B Contribute to the health and safety of the working environment
- DRTOG09B Contribute to the control of emergencies and critical situations
- DRTOG11B Prepare and operate drilling fluid systems
- DRTOG12B Perform rig floor operations

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

## DRTOG11B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Prepare and operate drilling fluid systems

This unit covers the operation of drilling fluid systems as carried out by a floorman.

This unit contains employability skills.

- **Units replaced:** DRTOGON11A, DRTOFOF11A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |  |   |
|--|---|
| 1. Plan and prepare for operations.    | 1.1 Obtain personal protection equipment.<br>1.2 Assess geographic layout of the active, reserve and slug pits.<br>1.3 Assess operation of mud mixers, dump valves and equalising valves.<br>1.4 Identify and locate mud pump and discharge system.   |
| 2. Establish operational requirements. | 2.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>2.2 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>2.3 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>2.4 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>2.5 Confirm availability of required quantities and type of consumables against operational requirements.<br>2.6 Identify errors, omissions and shortages and take appropriate remedial action within functional responsibility. |
| 3. Select and test equipment.          | 3.1 Conform to safe working practices and current legislative and operational requirements.<br>3.2 Identify and select equipment appropriate for the work to be performed and conforming to operational requirements.<br>3.3 Confirm equipment is functional and fit for the purpose and the environment in which it will be used.<br>3.4 Identify defects in the equipment and take appropriate remedial action within functional responsibility.  |

- |                             |  |
|-----------------------------|--|
| 4. Prepare drilling fluids. | 4.1 Conform to safe working practices and current legislative and operational requirements.  |
|                             | 4.2 Confirm availability of sufficient quantities and types of fluids against operational requirements.  |
|                             | 4.3 Confirm tanks and mixing equipment are clean and free from contamination in accordance with instructions.  |
|                             | 4.4 Mix and treat fluids in accordance with the specification.   |
|                             | 4.5 Obtain, correctly label and store samples according to operational requirements.   |
|                             | 4.6 Identify defects in the equipment and take appropriate remedial action within functional responsibility.   |
| 5. Pump drilling fluids.    | 5.1 Conform to safe working practices and current legislative and operational requirements.  |
|                             | 5.2 Confirm recording and monitoring devices are preset to required parameters.  |
|                             | 5.3 Operate equipment in accordance with operational requirements.   |
|                             | 5.4 Identify faults and defects accurately and take appropriate remedial action within functional responsibility.  |
|                             | 5.5 Obtain samples, weigh, measure viscosity and record details as per instructions.   |
|                             | 5.6 Operate pipe in the derrick manually and under supervision.  |
|                             | 5.7 Grease crown block and identify hanging sheaves.   |
|                             | 5.8 Record data accurately at appropriate times and frequencies in accordance with operational requirements.   |
| 6. Operate hopper system.   | 6.1 Recognise operation of the hopper system.  |
|                             | 6.2 Operate and maintain shale shakers, desilter, desander, degasser, mud cleaner and centrifuge in accordance with company and manufacturer's requirements. |
|                             | 6.3 Measure and log mud properties correctly.  |
|                             | 6.4 Recognise, record and report changes in returns of drilling fluid and pit volumes.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Maintain and operate mud mixers, dump valves and equalising valves in the mud pits system
- Safely add mud materials to the mud systems under the mud engineer's instructions
- Operate and maintain all the mud treatment units
- Accurately take mud properties readings and legibly record them
- Interpret and act on additional flow in the mud returns or an increase in mud pit volume
- Operate pipe in derrick as directed either manually or using hydraulic racking system where fitted
- Assess need and action greasing of crown block and hanging sheaves

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Chemical handling procedures
- Operating principles of the systems, equipment and their relationship to other plant
- Fluid types and composition
- Rig safety and emergency procedures
- Safe operating procedures when operating equipment
- Layout of mud circulating, mixing and suction systems
- Geography of active, reserve and slug pits
- Layout of shaker, degasser and settling pits, and sand traps
- Materials Safety Data Sheet (MSDS)
- Rig maintenance
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a floorman in operating drilling fluid systems.

Briefings/handover details may include:

- Pre-tour meeting
- Safety meeting
- Use of hazardous chemicals
- Safety briefing/induction
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:	<ul style="list-style-type: none"><li>• Protective clothing</li><li>• Safe use of hazardous chemicals</li><li>• (PSLA) Petroleum Submerged Lands Act (where relevant)</li><li>• Duty of care</li><li>• Petroleum regulations</li></ul>
Communications may include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li></ul>
Recorded information may include:	<ul style="list-style-type: none"><li>• Drilling fluids</li><li>• Faults/defects</li><li>• Pit volumes</li><li>• Pipe tallies</li><li>• Mud properties</li></ul>
Numerical tasks may include:	<ul style="list-style-type: none"><li>• Mixing quantities, e.g. mud</li><li>• Measurement of mud properties, e.g. viscosity, density</li><li>• Flow rate</li><li>• Pressure</li></ul>
Weather conditions may include:	<ul style="list-style-type: none"><li>• Wind</li><li>• Rain</li><li>• Snow</li><li>• Dust</li><li>• Hot and cold</li><li>• Calm to severe weather conditions</li><li>• 24 hour operation</li></ul>
Equipment may include:	<ul style="list-style-type: none"><li>• Pumps</li><li>• Lines</li><li>• Hoppers</li><li>• Manifolds</li><li>• Shale shakers</li><li>• Degasser</li><li>• Centrifuges</li><li>• Desanders/desilters</li></ul>
Fluid systems include:	<ul style="list-style-type: none"><li>• Mixing</li><li>• Transfer</li><li>• Bulk</li><li>• Circulating</li></ul>

Fluid mix specification includes:

- Volume
- Density
- Viscosity
- Mud properties

Parameters include:

- Flow rate
- Pressure
- Density

Remedial action taken to deal with errors, omissions and shortages may include, but are not limited to:

- Report
- Record
- Adjust
- Repair
- Isolate

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances (e.g. H 2S)
- Continuous communication maintained
- Reacting to on-site emergencies
- Dealing with contamination

Preparation may include:

- Viewing geographic layout of the active, reserve and slug pits
- Operation of mud mixers, dump valves and equalising valves
- Using Mud pump and discharge system
- Read and interpret mud Materials Safety Data Sheets (MSDS)
- Viewing layout of shaker pits, degasser pit, settling pit and sand trap



## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Occupational Health and Safety obligations
- Operating principles of the system, equipment and their relationship to other plant
- Selection and testing of equipment
- Drilling fluid preparation
- Pumping of drilling fluids
- Rig safety and emergency procedures
- Knowledge of pressure rates

**Interdependent assessment of units**

- DRTOG08B Contribute to the health and safety of the working environment
- DRTOG09B Contribute to the control of emergencies and critical situations
- DRTOG10B Establish and maintain effective working relationships
- DRTOG12B Perform rig floor operations

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG12B****Unit Descriptor****Employability Skills****Application of the Unit****Perform rig floor operations**

This unit covers the performance of rig floor operations as carried out by a floorman.

This unit contains employability skills.

- **Units replaced:** DRTOGON12A, DRTOFOF12A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                   |   |
|-----------------------------------|---|
| 1. Prepare equipment.             | 1.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.2 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.3 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.4 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>1.5 Confirm availability of required quantities and type of consumables against operational requirements.<br>1.6 Identify errors, omissions and shortages and take appropriate remedial action within functional responsibility. |
| 2. Select handling equipment.     | 2.1 Conform to safe working practices and current legislative and operational requirements.<br>2.2 Identify and select equipment appropriate for the work to be performed and conforming to operational requirements.<br>2.3 Confirm equipment is functional and fit for the purpose and the environment in which it will be used.<br>2.4 Identify faults in the equipment and take appropriate remedial action taken within functional responsibility.   |
| 3. Handle tubulars and equipment. | 3.1 Conform to safe working practices and current legislative and operational requirements.<br>3.2 Position tubulars and equipment according to operational requirements.<br>3.3 Make and break connections safely in accordance with operational requirements.<br>3.4 Identify faults and defects accurately and take appropriate remedial action within functional responsibility.<br>3.5 Handle equipment using safe lifting and handling techniques.<br>3.6 Record data accurately at appropriate times and frequencies in accordance with operational requirements.  |

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|--|--|
| 4. Prepare and run drill string.               | 4.1 Obtain and wear personal protective equipment, appropriate to task.<br>4.2 Measure and record all down hole tools and pipe to assist driller.<br>4.3 Convey pipe and tools to drill floor with protectors fitted and in accordance with company safety operating procedures.<br>4.4 Check tongs and slip dies for cleanliness and sharpness and secure long lines.<br>4.5 Inspect, service and operate manual slips correctly.<br>4.6 Operate make-up and break-out manual tongs correctly.<br>4.7 Move drill floor drilling tools and equipment in accordance with operating procedures.<br>4.8 Apply correct manual handling techniques.<br>4.9 Conduct thread cleaning, inspection and lubrication safely.<br>4.10 Make up and run drill string, applying correct use of chain tongs, safety clamps, rig tongs, slips and elevators.  |
| 5. Prepare, run and cement casing.             | 5.1 Prepare casing in accordance with rig operating procedures.<br>5.2 Prepare shoe joints in accordance with company and manufacturer's requirements.<br>5.3 Prepare well heads/casing hangers in accordance with manufacturer's and site requirements.<br>5.4 Prepare running tools and cementing equipment in accordance with company and manufacturer's requirements.<br>5.5 Check lifting appliances, identify and report faults.<br>5.6 Check and prepare handling equipment.<br>5.7 Prepare casing centralisers correctly.<br>5.8 Prepare and install guide frames as required.<br>5.9 Prepare appropriate well control equipment and mitigation control equipment in accordance with site requirements.<br>5.10 Run casing in correct sequence.<br>5.11 Fill casing safely.<br>5.12 Connect appropriate cement line as per company procedure.<br>5.13 Carry out cementing room duties while mixing.<br>5.14 Assist as directed in preparing, running and cementing of cementing casings. |
| 6. Run cement stinger assembly (non-standard). | 6.1 Land casing at appropriate joint.<br>6.2 Assemble appropriate equipment to run cement stinger.<br>6.3 Run drill pipe stringer inside casing as per rig specific operating procedure.   |

- |  |   |
|--|---|
| 7. Assist in preparation and running of blow out prevention (BOP) stack, riser and diverter package. | 7.1 Prepare running BOP equipment in accordance with rig operating procedures.<br>7.2 Position BOP over the wellhead using the appropriate system.<br>7.3 Assemble and check riser running equipment.<br>7.4 Assemble and check appropriate pressure test caps.<br>7.5 Assemble and check appropriate handling equipment.<br>7.6 Assemble and check riser angle beacon and hole positioning equipment.  |
| 8. Examine and service drill floor equipment.  | 8.1 Read, interpret and apply lubrication schedules.<br>8.2 Carry out lubrication in accordance with company and manufacturer's requirements.<br>8.3 Identify and use correct types and quantities of lubricants for applications.<br>8.4 Check drawworks, rotary table, swivel, all valves, including standpipe and choke and kill valves, wirelines and hoists and identify, report and rectify faults as appropriate.                                      |
| 9. Maintain a high standard of rig husbandry.  | 9.1 Maintain drill floor and equipment to company standard.<br>9.2 Keep tools and portable equipment clean, well maintained and correctly stowed.<br>9.3 Seal and stow flammable substances according to manufacturer's and statutory requirements.<br>9.4 Keep covers and gratings in place, except when in use.<br>9.5 Maintain tongs, slips and dies in a clean and sharp condition.<br>9.6 Maintain non skid surfaces clean and free from oil and grease. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Prepare and run the temporary guide base:

- Correctly babbitt the wire line sockets
- Install the correct shear pins in the wire line sockets and their anchor pins correctly
- Paint and mark the guidelines, the temporary guide base running tool assembly and the temporary guide base guide cone correctly
- Check the temporary guide base running string to ensure that the guide base does not rotate
- Install and run the drill pipe guide frame above the temporary guide base on the running string

Prepare and run drill string:

- Measure and record pipe, sub and tools correctly
- Check the rig tongs and slips
- Check and use a safety clamp
- Service after use hole openers and large size non-sealed bearing bits

Assist as directed in preparing, running and cementing of casing:

- Check the slips, 350 ton elevator slips, elevator and tongs, including power tongs
- Assemble the casing centralisers correctly
- Make up the casing hanger and float or baffle collar correctly
- Make up the cement head sub
- Fill the casing safely and with the required frequency
- Thoroughly clean one mud pit and pre-mix any required mud materials
- Carry out the duties required in the cement room whilst mixing ie, manipulate the cement bulk pod, assist with any required additives, weigh the cement slurry
- Drop the trip dart or, if used, insert the second cement plug
- Switch from cementing unit displacement, ie. which valves to manipulate when ordered

Prepare and operate pipe handling equipment:

- Check and overhaul the rig tongs and slips
- Check the catheads and chains and operated pipe spinner correctly
- Assist in making a conventional drilling connection using correct procedures
- Know the additional safety regulations in force whilst flow testing a well
- Assist in rigging up the electro-logging sheave cable, and know the patterns and positions of its hanging points
- Know the safe practices to be observed when Well Loggers are handling explosives or radioactive materials

### Required knowledge:

- Rig safety and emergency procedures
- Company and statutory safety guidelines, procedures and practices
- Equipment safe operating procedures
- Equipment condition and reporting mechanisms
- Function of the triangular mark stamped just above the casing
- What steps are taken if the well kicks whilst running casing
- Lubrication techniques
- Rig maintenance

- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Conversion between metric and imperial
- Range of numerical calculations and measurements
- Well control

## RANGE STATEMENT

This unit covers the role of a floorman in performing rig floor operations.

Briefings/handover details may include:

- Pre-tour safety meetings
- Work inspection
- Task specific - Job Safety Analysis (JSA)
- Permit to work prepared if necessary
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety Acts and Regulations
- Duty of care
- Petroleum act
- Australian Standards
- Codes of practice
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Hand signals
- Oral instruction
- Telephone
- Public address system
- Written work instructions

Recorded information may include:

- Tubulars and equipment
- Faults and defects
- Downhole tools and pipe measurements
- Quantities of lubricants used

Data to be reviewed may include:

- Job instructions
- Company/manufacturers' safe operating procedures
- National standards and codes of practice for manual handling
- Lubrication schedules
- Labels on hazardous materials
- Job Safety Analysis (JSA)
- Training materials

Numerical tasks may include:

- Length
- Quantities
- Volumes
- Conversion rates

Weather conditions may include:

- Day/night
- Dry/wet
- Hot/cold
- Storms/lightning -dust storms/wind

Equipment may include:

- Elevators - manual/automatic
- Tongs - manual/power
- Slips - manual/power
- Bushings
- Job specific tools
- Winches
- Down hole
- Handling
- Consumables - dope/rope
- Catheads
- Pipe racking
- Well control equipment
- Hoisting/lifting equipment
- Casing stabbing basket/platform

Tubulars include:

- Drill pipe
- Drill collars
- Casing - 20", 13 3/8", 9 3/8", 7" and 5 ?"
- Tubing
- Riser

Equipment may include:	<ul style="list-style-type: none"><li>• Drill pipe</li><li>• Stinger running equipment</li><li>• Temporary guide bases (TGB/PGB)</li><li>• Riser</li><li>• Diverter</li><li>• Bops</li><li>• Wellheads</li><li>• Casing running tools</li><li>• Cementing hose</li><li>• Running tools</li><li>• Winches</li></ul>
Safety equipment may include:	<ul style="list-style-type: none"><li>• Safety harness</li><li>• Inertia reels</li><li>• Belts</li></ul>
Personal protective equipment may include:	<ul style="list-style-type: none"><li>• Safety helmet</li><li>• Safety footwear</li><li>• Safety glasses</li><li>• Gloves</li><li>• Riding belt</li><li>• Safety belt</li><li>• Life vest</li></ul>
Utilities may include:	<ul style="list-style-type: none"><li>• Air</li><li>• Fuel</li><li>• Power</li><li>• Craneage</li><li>• Lighting</li></ul>
Difficulties may include:	<ul style="list-style-type: none"><li>• Unclear instructions</li><li>• Imprecise details</li><li>• Lack of information</li></ul>
Remedial action taken to deal with errors, omissions and shortages may include:	<ul style="list-style-type: none"><li>• Report</li><li>• Record</li><li>• Rectify</li><li>• Replace</li><li>• Repair</li><li>• Adjust</li></ul>
Working practices may include:	<ul style="list-style-type: none"><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of toxic substances (e.g. H 2S)</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>



## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Follow safe work practices
- Use and maintenance of pipe handling equipment
- Teamwork operations
- Assess hazards
- Safe operation of drill floor equipment
- Use safety devices
- Operate and maintain well control tools
- Care and maintenance of tubulars
- Service down hole tools

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG08B Contribute to the health and safety of the working environment
- DRTOG09B Contribute to the control of emergencies and critical situations
- DRTOG10B Establish and maintain effective working relationships
- DRTOG11B Prepare and operate drilling fluid systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG13B****Apply occupational health and safety in the workplace****Unit Descriptor**

This unit covers the application of Occupational Health and Safety in the workplace as carried out by a derrickman/derrickhand.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON13A, DRTOFOF13A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Demonstrate safe working procedures.       | 1.1 Obtain and wear personal protective equipment, appropriate to task.<br>1.2 Set and pull manual slips correctly.<br>1.3 Operate make-up and break-out manual tongs correctly.<br>1.4 Move drill floor drilling tools and equipment in accordance with company and statutory safe operating procedures.<br>1.5 Interpret/apply national standards and codes of practice for manual handling.<br>1.6 Apply correct manual handling techniques when lifting pushing, pulling, carrying or restraining animate or inanimate objects.   |
| 2. Assist in manual handling risk assessment. | 2.1 Read, interpret and apply national standards and codes of practice for manual handling.<br>2.2 Apply sound manual handling techniques when lifting pushing, pulling, carrying or restraining animate or inanimate objects.  |
| 3. Participate in fire drills.                | 3.1 Recognise and comply with fire alarm signals.<br>3.2 Operate portable extinguishing equipment in accordance with manufacturer's and/or company procedures.<br>3.3 Operate fire hose and nozzles in accordance with manufacturer's and/or company procedures.<br>3.4 Identify and comply with fire team responsibilities.<br>3.5 Operate breathing apparatus in accordance with manufacturer's and/or company procedures.<br>3.6 Obtain and wear fire resistant clothing (fearnought suit), where available.<br>3.7 Read, interpret and apply boundary cooling procedures.<br>3.8 Read, interpret and apply emergency ventilation shutdown procedures.<br>3.9 Identify assigned boat station and follow procedure. |

- |  |   |
|--|---|
| 4. Participate in H2S drills.              | 4.1 Recognise H 2S alert alarms.  |
|  | 4.2 Understand H 2S hazards.  |
|  | 4.3 Understand procedure for testing PA equipment.                        |
|  | 4.4 Learn and comply with search and rescue procedure.                    |
| 5. Participate in BOP drills.              | 5.1 Recognise alarm signal.   |
|  | 5.2 Administer crew positioning.  |
|  | 5.3 Operate choke controls.   |
|  | 5.4 Coordinate mixing of heavy weighted chemicals.                        |
|  | 5.5 Liaise with driller on kill sheet.                                    |
| 6. Carry out emergency drilling situation. | 6.1 Standby in pump room.   |
|  | 6.2 Align mud circulating system in accordance with operating procedures. |
|  | 6.3 Mix drilling fluids to specification.                                 |
|  | 6.4 Activate equipment as directed.                                       |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Apply rig safety and emergency procedures
- Work within company and statutory safety guidelines, procedures and practices
- Use safe operating procedures when operating equipment
- Apply emergency ventilation shutdown
- Coordinate mixing of chemicals
- Instruct floor crew
- Operate choke control
- Operate for emergency drilling situation
- Use lock out and tag out system
- Demonstrate correct manual handling techniques
- Assist in the risk assessment of a manual handling task
- Secure for cyclone
- Operate helicopter deck monitor in both water and foam modes
- Operate for emergency drilling situation

### Required knowledge:

- Company and statutory safety standard and procedures, including duty of care
- Safety meeting conduct
- Fire alarm signals
- BOP alarm signals
- Gas alarm signals
- Fire extinguishing equipment
- Fire team procedures
- Breathing apparatus operation
- Accumulator control
- Kill sheet calculation
- Work permits system
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Rig emergency procedures and signals
- Training of subordinates
- Cyclone securing procedures
- Fearnought suit
- Assigned emergency evacuation/boat stations
- Orders for rig abandonment
- ILR launching procedure
- Capsule boarding procedures
- Survival capsule operation, including spray protection and air pressurisation systems

## RANGE STATEMENT

This unit covers the role of a derrickman/derrickhand in applying Occupational Health and Safety in the workplace.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards
- Pre-tour safety meeting
- Task specific - Job Safety Analysis (JSA)
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environmental
- Codes of practice
- Australian Standards
- Hazardous chemicals
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Personal protective equipment may include:

- Safety helmet
- Safety footwear
- Safety glasses
- Gloves
- Riding belt
- Safety belt
- Life vest
- Safety goggles
- H 2S equipment

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Hand signals
- Public address system
- Written work instructions

Data to be reviewed for specific information may include:

- National standards and codes or practice for manual handling
- Manufacturers'/company procedures
- Job Safety Analysis (JSA)
- Safety/FirstAid manuals

- Written tasks may include:
- Note taking for
    - Pre-tour safety meetings
    - Weekly safety meetings
    - Stop for safety meetings
- Weather conditions may include:
- Day/night
  - Storms and lightning
  - Hot/cold
  - Wet/dry (dusty)
- Safety equipment includes:
- Fire protection
  - First Aid
  - Survival
- Discharges may include:
- Liquids
  - Gases
  - Solids
- Materials may include:
- Flammable
  - Toxic
  - Corrosive
  - Explosive
  - Radioactive
- Personal protective equipment may include:
- Eye protection
  - Hearing protection
  - Gloves
  - Footwear
  - Hard hats
  - Respirators
- Working practices may include:
- Individual operation
  - Team operation
  - Use of personal protective equipment
  - Consideration of H<sub>2</sub>S and other toxic substances
  - Continuous communication maintained
  - Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Demonstrate safe working procedures
- Wear correct personal protective equipment
- Participate in emergency drills
- Assist in manual handling risk assessment
- Maintain fluid systems to operational requirements
- Occupational Health and Safety procedures
- Rig emergency procedures
- Permit to work system
- Fire prevention

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where appropriate:

- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOG19B Operate and maintain ancillary equipment
- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud system

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG14B****Unit Descriptor****Employability Skills****Application of the Unit****Control emergencies and critical situations**

This unit covers the control of emergencies and critical situations by a derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON14A, DRTOGOF14A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Control critical situations.            | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Identify developing, emerging and existing critical situations and take actions appropriate to the situation.<br>1.3 Activate relevant alarms in accordance with operational requirements.<br>1.4 Take actions to control and alleviate the situation in accordance with operational and legislative requirements.<br>1.5 Recognise symptoms/effects of contaminants, toxic materials and heat stress and take appropriate action.<br>1.6 Monitor the situation and take relevant actions to minimise risks to personnel, environment, process, plant and equipment.<br>1.7 Maintain reporting requirements in the event of a critical situation in accordance with safety management systems. |
| 2. Coordinate the response to emergencies. | 2.1 Identify developing, emerging and existing critical situations and take actions appropriate to the situation.<br>2.2 Activate relevant alarms in accordance with operational requirements.<br>2.3 Give information and instructions clearly, accurately and in a suitable format for the needs of relevant personnel.<br>2.4 Clarify and act upon advice received as appropriate to the situation.<br>2.5 Adhere to agreed emergency procedures in accordance with operational requirements.<br>2.6 Record information on relevant documentation accurately, completely and legibly.<br>2.7 Take immediate action to make the situation safe and minimise risks to personnel, environment, process, plant and equipment.  |



## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Implement personal protection requirements appropriate to the environment
- Recognise effects of changes of ambient conditions on operations
- Locate sources of information and interpret drawings and manuals
- Operate equipment

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Emergency procedures
- Evacuation procedures and personnel responsibilities
- Fire and gas control system
- Alarm system
- Emergency shutdown control system
- Effects of loss of any system upon the operation
- Functioning of process control, including instrumentation
- Equipment layout and its connection with other systems
- Consequences of emissions to the environment
- Operating parameters and tolerances
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a derrickman/derrickhand in controlling emergencies and critical situations.

Briefings/handover details may include:

- Location of potential hazards
- Pre-tour safety meeting
- Written instruction
- Permit to work requirements
- Reference to relative Job Safety Analysis (JSA)
- Assist with supervision of floor crew
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Code of practice
- Environment
- Mud systems
- Well control procedures
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Hand signals
- Verbal
- Written
- Public address system

Written reports may include:

- Hazard observation reports
- Rig safety audits

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry
- Wind/dust

Alarms may include:

- Audible
- Warning gestures
- Oral warnings
- Fixed system specific to installation

Critical situation may include:

- Operational difficulties
- Extreme weather
- Equipment failure
- Leaks
- Fires
- Kicks

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H<sub>2</sub>S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Safety management systems may include:

- Organisational
- Installation

Reporting requirements  
may include:

- Oral
- Written

Relevant actions taken to  
control and alleviate critical  
situations may include:

- Make safe
- Isolate
- Shutdown
- Evacuate work area
- Report
- Record
- Contain
- Rectify

Immediate actions may  
include:

- Inform external services
- Do nothing
- Activate internal emergency response teams
- Inform duty personnel
- Inform adjacent facilities
- Activate ESD
- Account for people
- Evacuate
- Assist in rescue of personnel

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Compliance with safety standards
- Clear communication and recognition of hazards
- Response to alarms
- Standard calculation rules for working loads
- Emergency shutdown control system
- Rig and emergency procedures
- Rig layout and muster points
- Evacuation procedures

**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud system
- DRTOGON18B Maintain services and operations to meet quality standards

**Context of assessment**

This unit will be assessed using a suitable simulation or if appropriate on an operational rig.

**Resource implications**

Access is required to appropriate simulations or an operational rig.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG15B****Create, maintain and enhance productive working relationships****Unit Descriptor**

This unit covers the creation, maintenance and enhancement of productive working relationships by a derrickman/derrickhand.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON16A, DRTOFOF15A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Create and enhance productive working relationships with colleagues. | 1.1 Make efforts to establish and maintain productive working relationships.<br>1.2 Provide opportunities to readily discuss work-related matters.<br>1.3 Offer advice in a helpful manner and, where necessary, refer individuals to specialists.<br>1.4 Deal with differences in ways that maintain productive working relationships.<br>1.5 Meet undertakings to others.<br>1.6 Inform people sufficiently about changes in policy and working practices which may affect them.<br>1.7 Raise any concern over the quality of work directly and discussed with the people concerned.<br>1.8 Encourage individuals to offer ideas and views and give due recognition of these.<br>1.9 Give the reasons clearly where ideas are not taken up.<br>1.10 Make opportunities readily available for individuals to discuss personal problems. |
| 2. Carry out work handovers.  | 2.1 Record relevant information accurately and legibly in accordance with operational requirements.<br>2.2 Relay/receive current operational status to/from relevant personnel accurately and completely.<br>2.3 Relay operating instructions accurately and completely to relevant personnel.<br>2.4 Leave work area clean and hazard free in accordance with operational requirements.   |

- |   |   |
|---|---|
| 3. Enhance productive working relationships with one's immediate manager. | 3.1 Keep immediate manager informed in an appropriate level of detail about activities, progress, results and achievements. |
|   | 3.2 Provide information about problems and opportunities clearly, accurately and with an appropriate degree of urgency.     |
|   | 3.3 Seek information and advice on matters within the given area of responsibility from immediate manager, as necessary.    |
|   | 3.4 Present clear proposals for action at an appropriate time and with the right level of detail.                           |
|   | 3.5 Consider the reasons where proposals are not accepted, and, where appropriate, put forward alternative proposals.       |
|   | 3.6 Make efforts to avoid damaging the relationship with the immediate manager where there are disagreements.               |
|   | 3.7 Seek ways actively of improving the relationship with the immediate manager.  |
|   | 3.8 Satisfy requirements of job role.   |
|   | 3.9 Perform activities in a helpful and willing manner.   |

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

#### **Required skills:**

- Pass on information accurately and completely
- Control/minimise work area hazards
- Locate and implement organisational policies, procedures, instructions

#### **Required knowledge:**

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Workplace reporting procedures
- Barriers to communication
- Emergency procedures
- Permit to work system
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Rig/site technology

## RANGE STATEMENT

This unit covers the role of a derrickman/derrickhand in creating, maintaining and enhancing productive working relationships.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards
- Task specific - Job Safety Analysis (JSA)
- Pre-tour safety meetings
- Delegate and supervision of crews
- Encourage teamwork and clear communication
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Code of practice
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Oral instruction
- Written instruction
- Hand signals
- Telephone
- Public address system

Weather conditions may include:

- Day/night
- Storm/lightning
- Hot/cold
- Wet/dry

Information may include:

- Formal
- Informal
- Oral
- Written

People includes:

- Staff representatives
- Colleagues
- Line managers
- Co-workers
- Supervisors
- Customers
- Suppliers

Information and advice on operational requirements includes:

- Organisational policies, plans and procedures
- Legislation
- Quality assurance standards
- Approved codes of practice
- Personal and interpersonal issues
- Proposals concerning new courses of action
- Working arrangements of those for whom one has responsibility
- Safety, operational

Communications may include:

- Written
- Oral
- Practical demonstration
- Visual/pictorial

Handovers may include:

- Next shift
- Next job
- Next person
- Previous shift
- Previous job
- Previous person

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Application of good safety practices
- Communication and teamwork approach
- Knowledge to fulfil operational requirements of job description
- Implement and maintain communications
- Minimise hazards (hazard assessment)
- Ensure adherence to organisational procedures and practices



**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit.

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG19B****Unit Descriptor****Employability Skills****Application of the Unit****Operate and maintain ancillary equipment**

This unit covers the operation of ancillary equipment as carried out by an onshore derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON19A, DRTOGOF22A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Plan and prepare for operations  | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements.                        |
| 2. Maintain pumps.  | 2.1 Inspect lubrication, brake cooling and oil flushing pumps for leaks or abnormal operation.<br>2.2 Lubricate pumps.<br>2.3 Replace packing in centrifugal pumps.   |
| 3. Operate, maintain and repair gate valves associated with the mud system. | 3.1 Align, open and close valves in accordance with operating procedures.<br>3.2 Lubricate valve stems as required.<br>3.3 Identify defective parts in valves and replace.  |
| 4. Operate and maintain chemical mixing pumps and equipment.                | 4.1 Identify faults or potential faults and report immediately.<br>4.2 Identify, record and/or report requirement for repair or maintenance.<br>4.3 Perform equipment checks regularly and efficiently as prescribed in the operator's manual.<br>4.4 Line up valves properly.<br>4.5 Engage mixing and transfer pumps.<br>4.6 Lubricate valves, mixing pumps and transfer pumps.<br>4.7 Replace defective or malfunctioning parts and valves on pumps.<br>4.8 Clean and inspect mixing hopper and mixing area.<br>4.9 Isolate equipment as required. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Maintain pumps in pump room
- Align, open and close valves as appropriate
- Lubricate valve stems
- Replace defective parts in valves
- Operate and maintain chemical mixing pumps and equipment
- Clean and inspect mixing hopper and mixing area
- Isolate and lock out equipment as required

### Required knowledge:

- Mud system ancillary equipment
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures when operating equipment
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Company maintenance system
- Permit to work system
- Equipment isolation procedures
- Specialised hand tools

## RANGE STATEMENT

This unit covers the role of a derrickman/derrickhand in operating and maintaining ancillary equipment.

Briefings/handover details may include:

- Task specific information
- Pre-tour safety meeting
- Location of potential hazards
- Task specific - Job Safety Analysis (JSA)
- Supervision of floor crew (assist with)
- Pump equipment maintenance
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Code of practice
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Oral instruction
- Written instruction
- Hand signals
- Telephone
- Public address system

Recording requirements can include:

- Service and maintenance
- Replacement parts

Weather conditions may include:

- Day/night
- Storm/lightning
- Hot/cold
- Wet/dry

Safety equipment includes:

- Fire protection
- First Aid
- Survival
- Vessel entry equipment

Discharges may include:

- Liquids
- Gases
- Solids

Materials may include:

- Flammable
- Toxic
- Corrosive
- Explosive

Equipment may include:

- Mixing pumps
- Change pumps
- Desander
- Desilter
- Centrifuges
- Degasser
- Piping
- Valves
- Agitators
- Caustic mixing system
- Mud guns
- Mixing hoppers
- Shearing devices
- (PVT) system
- Pit volume totaliser
- Lubrication pumps
- Bolt material system
- Chemical handling system
- Dust/fuel extraction system

Personal protective equipment may include:

- Eye protection
- Hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Planning and preparation
- Maintaining mud pumps
- Maintaining mud system
- Communication and record keeping
- Occupational Health and Safety procedures
- Abilities to adapt to new situations using appropriate strategies, e.g. innovation, persistence, resourcefulness
- Recognise and report equipment malfunction or failure
- Isolation and containment procedures
- Knowledge of equipment
- Knowledge of maintenance procedures

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG20B****Unit Descriptor****Employability Skills****Application of the Unit****Conduct and maintain derrick operations**

This unit covers the maintenance of the derrick as carried out by a derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON20A, DRTOGOF16A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Prepare equipment.  | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>1.6 Confirm availability of required quantities and type of consumables against operational requirements.<br>1.7 Identify errors, omissions and shortages and take appropriate remedial action within functional responsibility.<br>1.8 Inform driller of current operating conditions. |
| 2. Handle tubulars and equipment.  | 2.1 Conform to safe working practices and current legislative and operational requirements.<br>2.2 Position tubulars and equipment according to operational requirements.<br>2.3 Give assistance to make and break connections where appropriate.<br>2.4 Identify faults and defects accurately and take appropriate remedial action within functional responsibility.<br>2.5 Handle equipment using safe lifting and handling techniques.  |
| 3. Inspect and perform routine maintenance of derrick and connected equipment. | 3.1 Inspect safety lines, ropes, air hoists, monkey board, sheaves, crown block, derrick bolts, pins and welds, and all other lines and equipment in or attached to the derrick.<br>3.2 Lubricate air hoists, sheaves, crown block fast line guide.<br>3.3 Replace defective parts and effect minor repairs.<br>3.4 Perform jobs or tasks such as hanging back of travelling block, replacement of sheaves, as required.<br>3.5 Complete pre-raise and pre-circulation checks in accordance with statutory and company procedures.  |

- |   |  |
|---|--|
| 4. Prepare for and drill surface hole.        | 4.1 Establish circulation.<br>4.2 Perform pre-spud safety checks.<br>4.3 Check all connections and valves to floor are in proper position.<br>4.4 Maintain drilling fluid volume and properties.<br>4.5 Inform driller of current operating conditions.<br>4.6 Maintain inventory of circulation system/parts.<br>4.7 Check and record mud additives.<br>4.8 Check availability of derrick casing equipment.<br>4.9 Follow all operators' instructions.  |
| 5. Participate in head-up and pressure test.  | 5.1 Make preparations for necessary equipment changes.<br>5.2 Prepare drilling fluid.<br>5.3 Give assistance in nipping-up.<br>5.4 Give assistance to driller in BOP testing.  |
| 6. Drill main hole.                           | 6.1 Consult driller and mud engineer's program, if available, and follow instructions.<br>6.2 Maintain housekeeping and safe practices during drilling.<br>6.3 Assist in completion or abandonment of well as required.<br>6.4 Convert between metric and imperial.<br>6.5 Record reading of depth, direction and azimuth accurately and legibly.  |
| 7. Prepare to commence drilling operations.   | 7.1 Align equipment on active systems for drilling.<br>7.2 Turn on and check all appropriate machinery.<br>7.3 Watch for returns if riser installed.<br>7.4 Measure and log pit levels regularly.  |
| 8. Assist in running and cementing of casing. | 8.1 Follow instructions when running casing.<br>8.2 Align valves and fluid system for casing fill-up line.<br>8.3 Rig up, function test, lubricate and operate casing stabbing board.<br>8.4 Attach and secure safety lines to all circulating lines.<br>8.5 Circulate fluid in accordance with instructions.<br>8.6 Mix chemicals for cementers and align pumps to cementing unit.<br>8.7 Weigh cement as it is being mixed.<br>8.8 Align fluid system for displacement of cement.<br>8.9 Monitor returns and pits to assess circulation and returns. |
| 9. Assist Driller on drill floor.             | 9.1 Give assistance in handling and nipping-up of BOP stack.<br>9.2 Carry out role of assistant to driller when on drill floor in accordance with site instructions.   |
| 10. Shut down rig and rig out.                | 10.1 Wash and drain circulation system.<br>10.2 Repair equipment in accordance with company and manufacturer's instructions.<br>10.3 Store equipment in accordance with company procedures.  |



## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Listen and have an open mind
- Accept constructive criticism
- Understand written and verbal instructions
- Develop written and verbal communications skills
- Prepare and complete understandable reports
- Communicate tactfully with mud engineer and operator's representative and inform driller of problems if they arise

Brief relief derrickman/derrickhand on problems encountered on tour. Relief not to be done at monkey board.

- Make all reports clearly and concisely to the driller
- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Conduct routine maintenance of derrick
- Prepare for drilling operations
- Prepare for the tripping of tubulars
- Assist in running and cementing of casing
- Assist driller in handling and nipple up of BOP stack
- Act as assistant to driller on drill floor
- Have good attitude towards all drilling operations
- Keep circulation system clean and operating well
- Look after equipment and dispose of waste properly
- Follow instructions conscientiously
- Be aware of position of crew members on floor during handling of drillstem

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Safe operating procedures when operating equipment
- Drilling operation
- Conversion between metric and imperial
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore derrickman/derrickhand in conducting and maintaining the derrick.

Briefings/handover details may include:

- Pre-tour safety meetings
- Work inspection
- Task specific - Job Safety Analysis (JSA)
- Tour reports updated
- Permit prepared where applicable
- Safety equipment (e.g. harness, lanyards) inspected and used as appropriate
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Code of practice
- Environment
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations.

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals
- Telephone
- Public address system

Reading materials may include:

- Job instructions
- Technical information
- Mud engineer's program
- Manufacturers' instructions
- Job Safety Analysis (JSA)
- Training materials

Range of numerical calculations may include:

- Fractions, decimals, percentages
- Using appropriate instruments to measure-
  - volume
  - quantities
  - weight
  - length
  - density/specific gravity
  - temperature
  - ph
- Basic geometry, e.g. interpreting depth, direction and azimuth and dip of hole

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry

Equipment may include:

- Winches
- Ropes
- Racking board
- Safety belt
- Consumables
- Derrick climber/fall arrester, geronimo line and rider
- Backing System - manual/automated
- Casing stabbing system - board/basket
- Safety appliances and personal protective equipment
- Derrick escape system

Inspections and routine maintenance may include:

- Safety lines
- Ropes
- Air hoists
- Monkey board
- Sheaves
- Crown block
- Derrick bolts
- Pins and welds
- All other lines and equipment in or attached to the derrick

Lubrication of equipment may include:

- Air hoists, sheaves
- Crown block
- Fast line guide

Tubulars include:

- Drill pipe
- Drill collars
- Casing
- Tubing

Utilities may include:

- Air
- Fuel
- Power
- Craneage
- Lighting

Difficulties may include:

- Unclear instructions
- Imprecise details
- Lack of information

Remedial action taken to deal with errors, omissions and shortages may include:

- Report
- Record
- Replace
- Repair
- Adjust

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of substances
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Demonstrate ability to communicate clearly and follow procedures
- Maintain derrick, trip pipe and secure as required
- Comply with Occupational Health and Safety requirements
- Application of calculations and measurements, e.g. volume, similarity to ratio to estimate depth, width, basic geometry
- Ability to adapt to new situations using appropriate strategies, e.g. innovation, persistence, resourcefulness
- Derrick safety systems
- Communication system
- Full knowledge of racking system
- Well control

**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

## DRTOG21B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

### Trip casing

This unit covers the preparation and operation of the trip casing as carried out by an onshore derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON21A, DRTOGOF18A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| 1. Plan and prepare for operations.           | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements.   |
| 2. Prepare to trip casing.                    | 2.1 Check grade or grades of casing.<br>2.2 Supervise crew in correctly positioning casing on racks.<br>2.3 Measure and record casing.<br>2.4 Identify joint by the numerical order in which it will be run in the hole and its measured length.<br>2.5 Supervise crew to remove thread protectors, rabbit casing, clean and lubricate threads in accordance with good oilfield practice.<br>2.6 Check casing shoe and hanger joints for damage to threads, sealing surfaces and flapper valves where fitted.<br>2.7 Assemble and check operating conditions of casing running equipment, including slips, tongs, elevators, rubber clamp, protectors and tailing ropes.<br>2.8 Line up pumps to fill casing during running operation. |
| 3. Operate derrick during tripping of casing. | 3.1 Steady casing during stabbing.<br>3.2 Release pick-up elevators.<br>3.3 Align casing for make-up correctly.<br>3.4 Latch side door or slip type elevators.<br>3.5 Relieve casing stabber during casing running operations.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Supervise deck crew in correctly positioning casing in pipe bays
- Remove thread protectors, rabbit casing, clean and lubricate threads
- Check casing shoe and hanger joints for damage to threads, sealing surfaces and flapper valves where fitted
- Assemble and check operating condition of casing running equipment, including slips, tongs, elevators, rubber clamp, protectors and tailing rope
- Line up pumps to fill casing during running operations
- Work derrick correctly during tripping of casing
- Steady casing during stabbing
- Release pick-up elevators when directed
- Correctly align casing for make-up
- Correctly latch side door or slip type elevators
- Check grades of casing and supervise deck crew in correctly positioning casing in pipe bays
- Measure and record casing in the numerical order in which it will be run into the hole

### Required knowledge:

- Drilling operation
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures when operating equipment
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of a derrickman/derrickhand in operating the trip casing.

Briefings/handover details may include:

- Pipe and/or casing tally
- Preparation of casing running equipment (tongs/stabbing board)
- Location of potential hazards
- Review of Job Safety Analysis (JSA)
- Pre-tour safety meeting
- Inspection and use of safety harness and lanyard and other safety equipment
- Inspection and use of hydraulic power tongs, slips, elevators
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Codes of practice
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (where appropriate)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals
- Public address system

Weather conditions may include:

- Day/night
- Storms - high winds and lightning
- Hot/cold
- Wet/dry (dusty)

Safety equipment includes:

- Fire protection
- First Aid
- Survival



Discharges may include:

- Liquids
- Gases
- Solids

Materials may include:

- Flammable
- Toxic
- Corrosive
- Explosive
- Radioactive

Personal protective equipment may include:

- Eye protection
- Hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Demonstrate ability to communicate clearly and follow procedures
- Demonstrate ability to operate equipment in derrick and stab casing safely
- Comply with correct manual handling techniques
- Use appropriate safety equipment
- Rig up/rig down stabbing board
- Running casing
- Supervise deck crew
- Assemble and check casing
- Work derrick
- Recognise and report malfunctions/failures

**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

## DRTOG22B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Trip pipe

This unit covers the preparation and operation of the trip pipe as carried out by a derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON22A, DRTOGOF19A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |                                     |   |
|-------------------------------------|---|
| 1. Plan and prepare for operations. | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>1.6 Check safety lines, ropes and air hoists.<br>1.7 Check equipment for safety and operations. |
| 2. Prepare to trip tubulars.        | 2.1 Line up trip tank.<br>2.2 Prepare pipe racking system to stand back, run in, lay down or pick-up pipe, where applicable.  |
| 3. Trip tubulars.                   | 3.1 Latch elevators onto the tubulars which is stabilised by the derrickman while being stabbed by pulling out of the hole.<br>3.2 Latch elevators on to the tubular which is being stabilised by the derrickman while running into hole.<br>3.3 Visually check the elevator latch, identify faults and report.<br>3.4 Operate air hoist to manoeuvre tubulars in the derrick.  |
| 4. Operate racking system.          | 4.1 Release pipe from elevators and rack in proper position when pulling out of the hole.<br>4.2 Latch elevators onto drill string and stabilise while stand stabbed by roughnecks when running in the hole.<br>4.3 Operate air hoists which manoeuvre drill string in the derrick.   |

**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required skills:**

- Prepare pill
- Put trip tank on line and fill it
- Check safety lines, ropes and air hoists
- Stand back, run in, lay down and pick up pipecracker
- Release pipe from elevators
- Latch elevators on drill string and stabilise
- Operate air hoists
- Operation of a manual or automated racking system

**Required knowledge:**

- Drilling operation
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures when operating equipment
- Hand signals
- Working knots
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

**RANGE STATEMENT**

This unit covers the role of a derrickman/derrickhand in operating the trip pipe.

Briefings/handover details may include:

- Maintain and check pipe tally
- Preparation of derrick/floor equipment
- Line up trip tank/preparation of mud system
- Review of PTW requirements
- Pre-tour safety meeting
- Review of Job Safety Analysis (JSA)
- Safety briefing/induction
- Weekly safety meetings
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Codes of practice
- Australian Standards
- (PSLA) Petroleum Submerged Lands Act (where relevant)
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals
- Public address system

Recording tasks may include:

- Pipe tally sheets

Weather conditions may include:

- Day/night
- Storms and/or windy conditions/dusty conditions and lightning
- Hot/cold
- Wet/dry

Safety equipment includes:

- Fire protection
- First Aid
- Survival
- Safety harness

Discharges may include:

- Liquids
- Gases
- Solids

Materials may include:

- Flammable
- Toxic
- Corrosive
- Explosive
- Radioactive

Personal protective equipment may include:

- Eye protection
- Hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators
- Fall arrester

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Preparation and maintenance of derrick and associated equipment
- Ability to safely stab and rack pipe/lay down pipe
- Follow required manual handling procedures
- Prepare mud systems/equipment for tripping pipe/CSE
- Follow safe operating procedures
- Work knowledge of equipment
- Awareness of operations on the rig floor
- Maintain communication with driller while operating racking board

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe

and where relevant:

- DRTOGON15B Manage subordinates and equipment
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOG25B****Maintain standard procedures and safe working practices****Unit Descriptor**

This unit covers the application of safe work practices and procedures in onshore/offshore drill rig installations. In many instances team responsibilities will be involved.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG25A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Conduct daily rig maintenance and safety inspection.     | 1.1 Undertake rig safety checks before tour and discuss equipment problems with previous tour driller.<br>1.2 Spot check maintenance procedures against plans, identify and rectify anomalies and maintain records.<br>1.3 Conduct pre-tour Occupational Health and Safety meetings with team members.   |
| 2. Comply with Government Regulations and Company Policies. | 2.1 Communicate regulations and procedures for controlling work and hazards both on the rig floor and in camp accommodation areas to team members.<br>2.2 Allocate employees' job responsibilities in accordance with regulations/company policies and within the bounds of their competence.<br>2.3 Ensure team work rules are understood, applied and modelled by all crew members.<br>2.4 Ensure regulations are obeyed by crew in line with statutory compliance.<br>2.5 Constantly assess rig operators against regulations and policies. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Conduct rig inspections in accordance with statutory/company regulations
- Allocate job responsibilities
- Manage teams
- Negotiate and resolve conflict
- Apply policies and procedures
- Communicate effectively to crews/teams
- Maintain compliance
- Maintain operating records

### Required knowledge:

- Government regulations
- Company policies and procedures
- Client policies and procedures
- Occupational Health and Safety compliance
- Rig safety procedures and reporting
- Conflict resolution
- Negotiation skills
- Problem solving techniques

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefings/induction
- Pre-tour meetings
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures include-
  - company
  - facility
- Client

Statutory adherence includes:

- Petroleum Acts relating to submerged lands
- AETC (PSLA) Petroleum Submerged Lands Act (offshore)
- Duty of Care
- Occupational Health and Safety Acts and Regulations
- Australian Standards
- Environmental



Communication channels include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li><li>• Intranet or internet based</li></ul>
Work conditions include:	<ul style="list-style-type: none"><li>• Night time operations</li><li>• Day time operations</li><li>• Hot climates</li><li>• Cold climates</li><li>• Wet weather conditions</li><li>• High wind</li></ul>
Operational instructions include:	<ul style="list-style-type: none"><li>• Regulations</li><li>• Company</li><li>• Operating company</li></ul>
Working practices include:	<ul style="list-style-type: none"><li>• Onshore drilling installation</li><li>• Offshore drilling installation</li></ul>
Communication occurs between:	<ul style="list-style-type: none"><li>• Crew</li><li>• Operations representative</li><li>• Rig manager/superintendent</li><li>• Previous tour driller</li></ul>
Records to be maintained include:	<ul style="list-style-type: none"><li>• Reports to rig manager</li><li>• Short notes</li><li>• Maintenance sheets</li><li>• Safety checks</li><li>• Inventories</li><li>• Spare parts order lists</li><li>• Employee evaluation forms</li></ul>
Documents to be read and interpreted include:	<ul style="list-style-type: none"><li>• Regulations and procedures</li><li>• Operational standards</li><li>• Occupational Health and Safety Legislation</li><li>• Drilling plan</li></ul>
Other skills required include:	<ul style="list-style-type: none"><li>• Negotiation skills</li><li>• Conflict resolution</li><li>• Problem solving skills</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Compliance to government regulations and company policies
- Occupational Health and Safety compliance
- Rig inspection and reporting. Ability to complete required documentation legibly, accurately and within the specified time frame
- Effective communication skills in spoken and/or written form with a range of personnel

**Interdependent assessment of units**

This unit may be assessed in conjunction with other relevant units.

**Resource implications**

This unit requires access to an operating rig.

**Consistency in performance**

Evidence should be available of the ability to perform this unit over a range of typical conditions.

**Context of assessment**

Assessment should concentrate on evidence obtained from a workplace application of this competency.

## DRTOG26B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

### Rig up

This unit covers rig-up operations in onshore/offshore drill rig installations. Liaison between the rig manager and the team is an important feature of this unit of competency.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG26A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1. Conduct pre rig-up operations                     | 1.1 Develop crewing schedules and allocate jobs to crew with drilling plan and prognosis being discussed with crews.<br>1.2 Carry out pre rig-up procedure inspections (by rig manager, operator and crew) in accordance with standards for individual rigs.<br>1.3 Check equipment for damage and/or loss by moving contractor.<br>1.4 Report and document damage claims in accordance with company procedures and confirm with transport company.<br>1.5 Locate equipment, including electrical and safety requirements, in correct position for rig-up. |
| 2. Rig up to spud.                                   | 2.1 Receive and action rig manager authorisation to commence rig-up to spud operations.<br>2.2 Receive detailed instructions on use and type of mud from the operator.<br>2.3 Mix mud to specifications with mud lines being connected and spud equipment being prepared.<br>2.4 Identify potential rig-up problems and take corrective action.<br>2.5 Keep rig manager informed of operations in accordance with legislative and company requirements.  |
| 3. Prepare for drilling of surface hole/subsea hole. | 3.1 Make equipment checks for nippling-up or cross-checked with subsea engineer.<br>3.2 Check casing tools for correct sizing and availability.<br>3.3 Check BOP stack against specifications and report and rectify any irregularity.<br>3.4 Identify special tool requirements and notify, and have endorsed by, relevant company personnel.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Oversee rigging
- Participate in inspections
- Develop crew schedules and allocate jobs
- Oversee mud-mixing operations
- Check equipment/tools and record, report and rectify faults
- Delegate
- Problem solve
- Plan for all circumstances
- Operate forklift in line with licensing requirements
- Read, interpret and apply regulations/company procedures
- Convert from metric to imperial measurement

### Required knowledge:

- Rigging and slinging
- Forklift operations
- Local authorities
- Rig specifications and measurements
- Metric-imperial conversion
- Marine operations

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Specific jobs include:

- Unloading of trucks
- Unsecuring of loads
- Assembling of rig
- Connecting power
- Drench digging
- Installing waste pits
- Stowing equipment in correct stowages

Spud equipment includes:

- Drill strings
- Handling gear including tools

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet or intranet communications

Work conditions include:	<ul style="list-style-type: none"><li>• Night time operations</li><li>• Day time operations</li><li>• Hot climates</li><li>• Cold climates</li><li>• Wet weather conditions</li><li>• High wind</li></ul>
Remedial action includes:	<ul style="list-style-type: none"><li>• Informing rig manager</li><li>• Informing company representative</li><li>• Allocating maintenance tasks to appropriate person</li></ul>
Operational instructions include:	<ul style="list-style-type: none"><li>• Job Sheet Analysis (JSA)</li><li>• Hazard sheets</li><li>• Lease layout</li><li>• Rig layout</li><li>• Company policies and procedures</li></ul>
Records to be maintained include:	<ul style="list-style-type: none"><li>• Crewing schedules</li><li>• Damage claims</li></ul>
Documents to be read and interpreted include:	<ul style="list-style-type: none"><li>• Rig standards/specifications</li><li>• Instructions (e.g. use and type of mud)</li><li>• Drilling plan</li><li>• Chemical labels</li><li>• Job Safety Analysis (JSA)</li></ul>
Calculations to be carried out include:	<ul style="list-style-type: none"><li>• Quantities</li><li>• Up-hole velocity</li><li>• Specific gravity</li><li>• Volume</li><li>• Hydrostatic pressures</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Crewing schedules
- Pre-rig procedures/rig specifications
- Rig up
- Equipment
- Inspections
- Company/statutory Occupational Health and Safety Policies/Procedures
- Accurate application of all calculations and measurements

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to an operational rig.

**Consistency in performance**

Evidence should be available of the ability to perform this unit under a range of conditions.

**Context of assessment**

Assessment should focus on evidence available from the workplace.

**DRTOG27B****Unit Descriptor****Employability Skills****Application of the Unit****Conduct pre-spud operations**

This unit covers the responsibility in allocating crew duties on an offshore drill rig installation.

This unit contains employability skills.

- **Sector specific information:** This unit is sector specific.
- **Units replaced:** DRTOG27A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Prepare for pre-spud operations.            | 1.1 Develop crewing schedules and allocate jobs to crews in line with operational requirements.<br>1.2 Check drilling and hoisting equipment, report damage to the rig manager and record in accordance with company policies and procedures.<br>1.3 Confirm availability of and inspect, clean and calibrate tubulars.<br>1.4 Lock pipe racks with drill pipe and position drill collars for immediate use.<br>1.5 Inspect casing running tools and prepare for operation.<br>1.6 Record casing tallies and report to appropriate company officer.   |
| 2. Conduct operations as per drilling program. | 2.1 Determine optimum circulating and penetration rates and check deviations are in accordance with operators drilling program.<br>2.2 Continually check mud cleaning equipment and screens for integrity and correct operation.<br>2.3 Check drilling fluid quantities against program requirements with sufficient being in reserve to kill well and keep hole on full trip.<br>2.4 Record correct mud properties on tour report.<br>2.5 Operate all equipment in accordance with manufacturer, regulations and company procedures.<br>2.6 Carry out all tasks in accordance with company Job Safety Analysis (JSA).<br>2.7 Maintain a sound working relationship with third party contractors. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Operate machinery in a safe manner
- Communicate effectively with management, crew and contractors
- Troubleshoot during drilling program
- Manage and maintain pre-spud operations
- Comply with government and regulations and company policies/procedures

### Required knowledge:

- Drilling program to pre-spud operations
- Drilling equipment
- Rig up procedures
- Casing
- Mud systems
- Routine drilling operations
- Job Safety Analysis (JSA)
- Marine operations

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefing/induction
- Pre-tour safety meeting
- Tour change over discussions
- Operator's representative memorandums
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence includes:

- (PSLA) Petroleum Submerged Lands Act
- Confined space
- Occupational Health and Safety
- Duty of care
- Australian Standards
- Company policies and procedures



Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Intranet or internet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Drilling rig and components
- Instrumentation
- Tubulars
- Mud system and auxiliary equipment

Operational instructions include:

- Drilling parameters to be maintained
- Mud density
- Casing depths

Working practices include:

- Pre-safety check
- Pre-spud check
- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies
- Emergency disconnect sequence

Remedial actions taken to deal with errors, omissions and shortages include:

- Corrective action request against procedures
- Alter Job Safety Analysis (JSA) to include improved procedures

Communication skills include:

- Meeting skills
- Negotiation skills

Records to be maintained include:

- Damage reports
- Casing tallies
- Pre-spud operational reports

Documents to be read and interpreted include:

- Load schedules
- Operating procedures
- Forms
- Government specifications

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Safety and Job Safety Analysis (JSA)
- Application of operators drilling program
- Shared crew responsibility
- Rig operation
- Communication - oral and written

### **Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

### **Resource implications**

This unit requires access to an operational rig.

### **Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

### **Context of assessment**

Assessment should focus on evidence arising from the workplace.

**DRTOG28B****Unit Descriptor****Conduct drilling operations**

This unit covers the conduct of drilling operations in onshore/offshore drill rig installations. Responsibilities include team communication and monitoring operation and team performance.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG28A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                  |  |
|----------------------------------|--|
| 1. Prepare for operations        | 1.1 Discuss and confirm drill program requirements with crew members.<br>1.2 Communicate emergency response and Occupational Health and Safety requirements, including the possibility of wellbore influx and well control, to crew members.<br>1.3 Check, clean and lubricate equipment, including mud riser/conductor/connections and rectify and report faults.<br>1.4 Check tool requirements and assembled in wellhead area.  |
| 2. Commence drilling operations. | 2.1 Double-check drilling program requirements to ensure safe operations.<br>2.2 Undertake surface hole drilling in accordance with Job Safety Analysis (JSA) and drilling program, and confirm with operator's representative.<br>2.3 Commence intermediate and main hole drilling operations in accordance with Job Safety Analysis (JSA) and drilling program.<br>2.4 Monitor, maintain and record drilling parameters in line with drilling program.<br>2.5 Calculate and maintain kill sheet requirements and carry out and record integrity tests in line with drilling program.<br>2.6 Maintain accurate tubular tallies.<br>2.7 Inspect and prepare casing running tools and casing for operation. |
| 3. Maintain drilling operations. | 3.1 Undertake cementing preparations in accordance with operator's instructions and company procedures.<br>3.2 Run casing and prepare for cementing in accordance with job safety analysis, and cement in accordance with well engineering prognosis.<br>3.3 Undertake preparations, and give assistance in drilling stem tests and logging and coring operations.<br>3.4 Instruct crew on safe core recovery procedures.<br>3.5 Put arrangements in place for nipping-up and drilling out.  |

- |  |  |
|--|--|
| 4. Drill intermediate and/or main holes. | 4.1 Confirm drilling program/timing schedule and comply with procedures.<br>4.2 Check equipment and tools for sizing and integrity with faults being rectified/reported.<br>4.3 Maintain hole within deviation limits.<br>4.4 Adhere to sound drilling and safety practices during nipping-up and pressure testing operations. |
| 5. Prepare for hole abandonment.         | 5.1 Confirm program for completion or abandonment with operator representative.<br>5.2 Check tools/equipment for integrity and record and report faults.<br>5.3 Complete appropriate communication and recording requirements to regulations and company policies/procedures.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Operate rig in a safe and productive manner
- Delegate work to individuals according to established levels of skill
- Administer effective communication skills - oral and written
- Troubleshoot and problem solve
- Forward planning in preparation of changing circumstances/contingencies
- Use a calculator and convert from metric to imperial measurements
- Shut down the rig in an emergency and coordinate an orderly evacuation if necessary

### Required knowledge:

- Rig components
- Rig specifications
- Downhole knowledge
- Types of mud available
- Rigging and slinging
- Rig maintenance procedures
- Evacuation procedures

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Pre-job requirements
- Pre-tour safety meeting
- Safety meeting/briefing
- Handover with oncoming driller

Operator equipment  
includes:

- Wellhead equipment
- Casing centraliser and nails
- Thread lubricant
- Cement plugs
- Cement mix chemicals

Communication channels  
include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Intranet and internet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Remedial action includes:

- Alteration to drilling program as approved by operator's representative via operator company head office

Operational instructions  
include:

- Job Safety Analysis (JSA)
- Manufacturer's guidelines
- Company policies and procedures
- Environmental guidelines

Records to be maintained  
include:

- Tour sheet
- API metric tour report
- Killsheet
- Incident report form
- Drilling line record sheet
- Shut-in procedures
- Weekly safety meeting report
- Pre-tour safety meeting report
- Warning/counselling record
- Equipment damage report

Documents to be read and interpreted include:

- Specifications
- Operator's instructions
- Drilling program
- Technical information
- Petroleum Act
- Industry regulations
- Government requirements
- Daily pre-tour checklist
- Daily pre-drilling checklist
- Job Sheet Analysis (JSA)
- API RP 53
- API RP 59 (if applicable)
- Site specific manual

Calculations to be carried out include:

- Quantities
- Up-hole velocity
- Specific gravity
- Volumes and capacities
- Pressure calculations

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Safe drilling operations
- Accuracy in adhering to the operator's wishes as outlined in the drilling program
- Forward planning
- Logistical preparation
- Hazard identification
- Communications
- Metric/imperial measurement conversion
- Accurate application of all calculations and measurements
- Rig shut down/emergency procedures

### Interdependent assessment of units

This unit may be assessed concurrently with other relevant units.

### Resource implications

This unit requires access to an operational rig.

### Consistency in performance

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence from the workplace.

## DRTOG29B

### Unit Descriptor

## Perform drilling calculations and reporting

This unit covers carrying out drilling calculations and reporting on onshore/offshore drill rig installations. This unit can be co-assessed with other units.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG29A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| 1. Comply with drilling reporting requirements. | 1.1 Apply correct methods for completing the Daily Drilling Report Forms.<br>1.2 Undertake incident investigations/evaluations in accordance with regulations and company policies/procedures and report correctly.<br>1.3 Investigate report and record Drilling Line Wear (ton-miles) program in accordance with regulations and company policies/ procedures.<br>1.4 Read and interpret a 24 hour drilling recorder chart to determine and pre-empt problems before they occur.<br>1.5 Translate affirmative accident prevention strategies following observed hazard identification. |
| 2. Document safety meeting outcomes.            | 2.1 Conduct pre-tour safety meeting using 5-minute safety topics as a guide and record proceedings in accordance with company/regulatory requirements.<br>2.2 Identify and record unsafe practices/work areas and discuss, adopt and record accident prevention measures.<br>2.3 Complete weekly safety meeting reports and submit to appropriate officers.<br>2.4 Undertake counselling sessions with employees and document in accordance with regulations and company policies/ procedures.   |
| 3. Complete safety reporting procedures.        | 3.1 Complete Safety Inspection Report on equipment/procedures in accordance with regulations and company policies/ procedures.<br>3.2 Minute equipment shortcomings, accurately complete equipment damage reports and submit to appropriate company officers for actioning.<br>3.3 Complete casing/tubing tally sheets accurately and submit to appropriate company officers.  |



**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required skills:**

- Maintain neat legible and accurate documents
- Use a calculator
- Conduct a meeting
- Report orally and in writing in a clear, concise manner
- Good man management skills
- Negotiate effectively in a range of situations
- Carry out an investigation and complete reporting requirements
- Complete a range of reports/forms

**Required knowledge:**

- Industry standard qualifications
- Knowledge of rig equipment
- IADC Rotary Drilling Modules
- A range of complex numerical calculations and measurements
- The range of documentation and their use
- Safety policy statement
- Counselling techniques
- Conflict resolution skills
- Statutory requirements (e.g. PSLA, Duty of care, Australian Standards)

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details  
include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence  
include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards

Communication channels include:

- Drilling reports (IADC - API Daily Drilling Reporting Requirements)
- Two-way radio
- Hand signals
- Telephone
- Double address system
- Written work instructions
- Intranet and internet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Working practices include, but are not limited to:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Compliance to drilling program and reporting requirements (IADC - API Daily Drilling Reporting Requirements)
- Application of all calculations and measurements required
- Ability to convert from metric to imperial and vice versa
- Knowledge and application of all required formulae
- Ability to complete required documentation accurately and legibly
- Effective communication in spoken/written form (e.g. reporting)
- Industry qualifications (ie: IWCF, IAWC, IADC Well Cap, Well Control)

### Interdependent assessment of units

This unit may be assessed concurrently with other relevant units.

### Resource implications

This unit requires access to an operational rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

**DRTOG30C****Carry out well control and blowout prevention****Unit Descriptor**

This unit specifies the competency required to carry out well control and blowout procedures. It includes the minimum criteria for competency assessment of well control and blowout prevention.

The unit covers managing well control strategies; the assessment, operation, testing and maintenance of well control equipment; the application of well control procedures; and the preparation of records and reports.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

This is a drilling unit of competency specifying the outcomes and safe work practices which should be applied by people carrying out well control and blow out activities related to onshore/offshore and coal seam methane drilling.

- **Units replaced:** DRTOG30A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

1. Manage well control strategies.

- 1.1 Identify **hazards**, and assess and manage risks associated with well control operations under varying **working conditions**
- 1.2 Identify and adhere to the **statutory requirements** for well control
- 1.3 Calculate mud weight, pressure losses, drill stem and annular volumes, MAASP and initial and final circulating pressures
- 1.4 Identify interpret and respond to the **early warning signs** of kicks and well going under-balance while drilling
- 1.5 Recognise **kick indicators** and apply kick detection methods and responses during well control operations

- 2. Assess well control equipment and report and record faults.
  - 2.1 Describe and apply purpose, use and relationship between equipment, indicators, counters and detection systems.
  - 2.2 Identify flow paths for normal drilling operations and well control from appropriate sources.
  - 2.3 Identify, confirm and apply pressure testing techniques.
  - 2.4 Demonstrate well shut-in procedures.
  - 2.5 Describe functions of the key componentry operational during a shut-in procedure prior to operations.
  - 2.6 Identify, explain and apply well-control testing procedures and principles in accordance with company/regulatory requirements.
  - 2.7 Describe and demonstrate correct installation, maintenance, wear and replacement of equipment.
  - 2.8 Carry out function and pressure testing procedures in accordance with company/regulatory requirements.
  - 2.9 Perform primary equipment failure well shut-in procedures in accordance with company/regulatory requirements.
  - 2.10 Understand and apply components of the industry regulation and government requirements related to well control and prevention during operations.
- 3. Apply well control procedures
  - 3.1 **Brief** crew on well control procedures
  - 3.2 Identify and apply appropriate pre-recorded information.
  - 3.3 Check, read, interpret and record pressures and gauges and undertake **corrective action**.
  - 3.4 Apply **operational instructions**
  - 3.5 Identify, verify and apply well control **working practices**
  - 3.6 Determine and apply well kill procedures
  - 3.7 Demonstrate correct application of trip kill sheet data and well-closure procedure when dealing with influx and shutting in a well while tripping/drilling.
  - 3.8 Calculate hydrostatic head at specific depths, and apply correct procedure when observing loss of circulation.
  - 3.9 Monitor and control **swabbing and surging**
  - 3.10 Perform correct tripping methods and tests in accordance with company/regulatory requirements.
  - 3.11 Apply stripping methods in accordance with operating requirements.
  - 3.12 Apply **recording and reporting** procedures in accordance with regulations and company policies/procedures
  - 3.13 **Manage** and **communicate** with crew during well control incident

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Specific skills are required to achieve the performance criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.

This includes the ability to carry out the following, as required, for safe well control and blow out prevention practices:

- working in a team
- taking measurements such as:
  - penetration rate
  - rotary torque
  - pump pressure
- making calculations and estimations such as:
  - pressure
  - density
  - volume
  - height
  - velocity
  - length
  - weight
- interpreting gauges, graphs
- detecting kick warning signs and indicators
- completing trip sheets
- completing kill sheets

### Required knowledge:

Specific knowledge is required to achieve the performance criteria of this unit, particularly for its application in the variety of circumstances in which this unit may be applied.

This includes knowledge of the following as required for safe well control activities.

- risk management related to well control
- well control procedures and their application
- function, operation, maintenance and use of well control and auxiliary equipment
- causes, effects and response to equipment failures
- drilling parameters and their interpretation
- measuring and testing device purpose and operation
- calculations necessary for well control procedures
- kick detection warnings and indications and the responses to them
- kill methods and procedures
- managing well control crew requirements
- well control emergency drills
- effects of swabbing and surging
- pressure concepts and effects
- formation integrity
- influx parameters
- safe well shut-in procedures
- tripping requirements and techniques
- constant bottom hole pressure method
- BOP closing unit
- type, format and implementation of well control documentation

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Hazards*** may include:

- **blow out gas to surface**

- ignition of gas
- toxic gases

- **pressurised coal seam gas system**

***Working conditions*** may include:

- night time operations
- day time operations
- hot climates
- cold climates
- snow
- wet weather conditions
- high wind

***Statutory requirements*** may include:

- (PSLA) Petroleum Submerged Lands Act (offshore only)
- Duty of care
- Australian Standards
- API RP 53
- Petroleum Act
- state-based regulatory requirements

***Early warning*** signs may be:

- rate of penetration trends
- drilling break
- trends shown in torque/drag

***Kick indicators*** may include:

- flow from wells (pump off)
- increase in flow from well (pumps on)
- pit volume gain

***Equipment*** may include:

- mud system
- blow out preventer
- manifolds and chokes
- accumulator
- degassers
- monitors
- diverters

**Briefings** may include:

- time of well shut-in
- initial shut-in pressures
- kill sheets
- stage of kill
- type of kill procedure employed
- status of well control equipment
- flow path for well control method
- safety briefing/induction
- pre-tour safety meeting
- weekly safety meetings
- Job Safety Analysis (JSA)
- agreed procedures including:
  - company
  - facility
  - client

**Corrective actions** may include:

- changing over pumps in the event of primary pump failure
- using secondary choke in the event of primary choke failure
- using alternate preventer in the event of primary failure or using preventers in combination if more than one installed
- running accumulator emergency backup in case of primary failure

**Operational instructions** may include:

- type of kill procedure to use
- type of shut-in procedure to use
- action to be taken in the event of approaching MAASP
- monitoring pit levels

**Working practices** may include:

- confirmation of shut-in
- monitoring of shut-in pressures
- monitoring of accumulator pressures
- correct SPM to be maintained during kill
- monitoring pump efficiency
- individual operation
- team operation
- use of personal protective equipment
- consideration of H 2S and other toxic substances
- consideration of flammables and ignition sources
- maintaining continuous communication
- reacting to on-site emergencies

**Swabbing and surging** may be affected by:

- well and pipe geometry
- well depth
- fluid characteristics
- hole conditions and formation properties
- tool pulling and running speeds
- BHA configuration



**Recording and reporting documents** may include:

- specifications
- operator's instructions
- drilling program
- technical information
- relevant legislation
- industry regulations
- government requirements
- daily pre-tour checklist
- daily pre-drilling checklist
- AP RP 53
- tour sheet
- tour reports and drilling logs
- kill sheet
- incident report form
- drilling line record sheet
- shut-in procedures
- weekly safety meeting report
- warning/counselling record
- equipment damage report

**Managing crew during well control incident** may include:

- informing subordinates of their roles and responsibilities in a well control situation
- observing and reacting on the performance of subordinates that falls below acceptable levels
- assessing crew performance to ensure competent handling of well control situations
- communicating potential problems to the crew and taking necessary actions
- instructing the crew to take up their assigned positions during well kill
- allocating personnel assignments to increase the fluid density and handle the resulting increased volumes during the well kill

**Communication channels** may include:

- two-way radio
- hand signals
- telephone
- public address system
- written work instructions
- internet and intranet

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of Assessment

- To demonstrate competence in this unit a person must be able to provide evidence that they can successfully and safely carry out well control and blowout operations to the site/organisation rules and procedures.
- Assessment will need to be contextualised for different types of well control and blowout operations, equipment and sites.

### Critical aspects of assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the Performance Criteria, Required Skills and Knowledge of this unit and include evidence of the following:

- compliance with legislative and regulatory requirements
- installation, operation, testing, monitoring and maintenance of well control equipment
- response to equipment failure to maintain safety and well integrity
- recognition and response to kick warning signs and indicators
- shutting-in a kicking well
- carrying out well control procedures
- completing documentation legibly and accurately
- accurate application of calculations and measurements
- response to and management of crew during a well control incident

### Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
- Assessment of essential underpinning knowledge, other than confirmatory questions, may be conducted in an off-site context.
- Assessment is to comply with relevant regulatory or Australian Standards requirements.
- The following resources should be made available:
  - workplace location;
  - equipment, materials and personnel relevant to conducting well control and blowout operations;
  - specifications and work instructions.

**Methods of assessment**

- Assessment must satisfy the endorsed Assessment Guidelines of the relevant Training Package.
- Assessment methods must confirm consistency and accuracy of performance together with application of required knowledge.
- Assessment can be by direct observation of tasks with questioning on required knowledge, by verification by third parties, or any valid method of collecting evidence of competency..
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge.
- Assessment should be applied under work related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- Assessment may be in conjunction with assessment of other units of competency as required by the job.

## DRTOG31B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Shut down rig

This unit covers shutting down the rig on an onshore drill rig installation within a team context.

This unit contains employability skills.

- **Sector specific information:** This is a sector specific unit.
- **Units replaced:** DRTOG31A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |                              |  |
|------------------------------|--|
| 1. Prepare to shut down rig. | 1.1 Receive, interpret and apply rig manager's shutdown instructions including preparations for return of rental equipment.<br>1.2 Receive and follow equipment maintenance/servicing requirements.  |
| 2. Rig-out to stack.         | 2.1 Make preparations to move and/or stack rig in accordance with procedures for each rig.<br>2.2 Undertake rig-out to stack in accordance with regulations and company policies/procedures.<br>2.3 Apply and comply with all Occupational Health and Safety and security strategies during rig-out operations.<br>2.4 Complete all reports and records and submit to appropriate personnel. |

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required skills:

- Delegate
- Administer good communication skills
- Problem solve
- Plan for all circumstances
- Oversee rigging operations

#### Required knowledge:

- Truck weight restrictions
- Rig specifications
- Forklift operations and limitations when supervising operations
- Permit requirements

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Handover with oncoming driller
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to--
  - company
  - facility
  - client

Statutory adherence include:

- Local authorities
- Permits

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Rental equipment includes:

- Non-magnetic drill collars
- String stabilisers
- Stabiliser inserts
- Drill bits
- Accommodation and/or office facilities
- Personnel entertainment equipment

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Operational instructions include:

- Shut down list
- Company policies and procedures
- Environmental guidelines
- Load list
- Vehicle escort guidelines
- Permit guidelines

Documents to be read and interpreted include:

- Shut down lists
- Maintenance lists
- Manufacturer's specifications
- Site requirements
- Company policy
- Safety procedures shut
- Job Safety Analysis (JSA)
- Relevant safety alerts

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Rig shutdown procedures
- Service/repair scheduling and procedures
- Permit requirements
- Rig specifications
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Application of required calculations
- Effective communication in spoken and/or written form with crew, rig manager, operator and other personnel as required

### **Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

### **Resource implications**

This unit requires access to an operating rig.

### **Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

### **Context of assessment**

Assessment should focus on evidence produced in the workplace.

## DRTOG32B

### Unit Descriptor

## Participate in nipping-up and pressure test

This unit covers nipping-up and pressure testing when rigging up on an onshore/offshore drill rig installation and is carried out in a team context.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG32A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |
|---|---|
| 1. Commence nipping-up operations.                        | 1.1 Check and adjust casing bowl and position level as required.<br>1.2 Perform BOP test as per operator's written instructions.<br>1.3 Carry out rig-up to drill-out operations in accordance with parameters and specifications.<br>1.4 Apply correct methods and safety cautions when drilling out.<br>1.5 Carry out pressure tests prior to drilling out and record in tour book. |
| 2. Pressure testing during intermediate and/or main holes | 2.1 Confirm pressure test program/timing and comply with procedures.<br>2.2 Check cup testers and plugs for sizing and integrity.<br>2.3 Monitor and maintain stack within deviation limit.<br>2.4 Adhere to safety practices during pressure test operations.  |

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required skills:

- Manage and monitor rippling up and pressure testing within a team environment
- Delegate
- Administer good communication skills
- Problem solve
- Plan for all circumstances
- Use hand tools correctly

#### Required knowledge:

- High pressure lines requiring pressure testing
- Understanding of test equipment
- Testing procedures
- Operations of a hydraulic torque wrench
- Rig maintenance procedures

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Pre-job
- Pre-tour
- Safety meeting
- Handover with oncoming driller

Statutory adherence includes:

- Petroleum Submerged Lands Act (PSLA)
- Duty of care
- Australian Standards

Communication channels may include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Equipment includes:

- Gaskets
- Hand tools
- Wrenches
- Cleaning materials

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Operational instructions include:

- Manufacturer's guidelines
- Company policies and procedures
- Environmental guidelines
- Statutory compliance/regulations

Records to be maintained include:

- Results of pressure testing
- Other test results as required
- Hazard observation reports



Documents to be read and interpreted include:

- Operator's instructions
- Government regulations
- Specifications
- Drilling program
- Occupational Health and Safety documents
- Material safety data sheets
- Job Safety Analysis (JSA)
- Relevant safety alerts

Range of numerical calculations may include:

- Volume
- Quantities
- Mass
- Weight
- Length
- Pressure
- Using calculator if required
- Using estimating skills (e.g. mental arithmetic, visualisation of size and quantity)
- Basic geometry (e.g. interpreting depth, direction, angles)
- Use of metric and imperial and conversion between the two

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

- Ability to carry out, nipping-up and pressure testing in accordance with operator's written instructions
- Ability to apply Occupational Health and Safety regulations to nipping-up and pressure testing
- Ability to manage team operations
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Accurate application of required calculations and measurements
- Ability to convert from metric to imperial and vice versa
- Effective communication in spoken and/or written form with crew, rig manager, operator and other personnel as required

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to an operating rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

## DRTOG33B

### Unit Descriptor

## Maintain drilling rig communications systems

This unit covers the maintenance of the rig communications system to ensure safe operating conditions for all personnel in onshore/offshore drill rig installations.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG33A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |  |   |
|--|---|
| 1. Conduct crew meetings.                  | 1.1 Receive and interpret information on special procedures and hazardous operations.<br>1.2 Inform crew of precautions and hazards and instruct on safety techniques and applications.<br>1.3 Reinforce emergency procedures with crew members being assigned specific responsibilities.<br>1.4 Conduct BOP drills with new and existing crew members, in accordance with regulations and company policies/procedures.   |
| 2. Apply correct communication strategies. | 2.1 Obtain, interpret and apply operator procedures and check further instructions received in writing before implementation.<br>2.2 Check drilling program procedures and operating conditions and report changes to the rig manager and operator's representative.<br>2.3 Apply correct handover/tour book procedures before, during and following shift.<br>2.4 Complete all documentation/reports including tour book and daily procedures accurately and in line with government regulations and company policies/procedures and submitted to appropriate personnel. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Communicate concisely both written and verbally, using appropriate computer technology
- Deal with cultural diversity
- Manage people and conduct training sessions both individually and groups
- Write neat and legibly
- Interpret and apply instructions and procedures
- Problem solve and research issues
- Resolve conflict and negotiate agreed team outcome

### Required knowledge:

- Job Safety Analysis (JSA)
- Material Safety Data Sheet (MSDS)
- Operating Procedures
- Emergency procedures
- Rig layout and components
- Man management
- Non-routine drilling operation
- Normal drilling operation

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefing/induction
- Pre-tour safety meeting
- Operator requirements
- Emergency procedures
- Muster points
- Importance of magna
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence include:

- (PSLA) Petroleum Submerged Lands Act
- Job Safety Analysis (JSA)
- Company policies
- Occupational Health and Safety
- Drilling program
- Duty of care
- Australian Standards

Communication channels include:

- Previous shift reporting
- Written and/or verbal instructions and operating procedures
- Equipment/machine tagging procedure
- Two-way radio and radio network
- Hand signals
- Satellite phones
- Public address system
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Personal protective equipment
- Portable fire equipment
- Rig tool
- Safety equipment
- Associated BOP equipment

Operational instructions include:

- Company policies and procedures
- Job Safety Analysis (JSA)
- Hazard sheet
- Material Safety Data Sheet (MSDS)
- Occupational Health and Safety policies
- Operator policies and procedures

Working practices included:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies
- Safe working practices

Communication occurs between:

- Crew
- Management
- Clients
- Immediate supervisor
- Service and supply companies

Records to be maintained include:

- Tour sheets
- Pre-tour safety meeting reports
- Weekly safety meeting reports
- Rig safety audits
- Operation sheets
- Requisition forms
- Accident/incident reports
- Government reports
- Employee evaluation forms

Documents to be read and interpreted include:

- Work schedule
- Manuals
- Company policy and procedure documents
- Legislation
- Operator's representative instructions
- Contracts
- Drilling program
- Completed tour sheets
- Government forms

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

- Coordinate drill rig communication systems
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Effective communication skills in spoken and/or written form with a range of personnel
- Conduct meetings and apply operating procedures within a team context

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to an operating rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

## DRTOG34B

### Unit Descriptor

## Manage equipment maintenance

This unit covers all components of planning, costing and organising maintenance and details the responsibilities for equipment maintenance in onshore/offshore drill rig installations.

### Employability Skills Application of the Unit

This unit contains employability skills.

- **Sector specific information:** This is a core unit
- **Units replaced:** DRTOG34A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector** Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |
|---|---|
| 1. Check new and used equipment.                | 1.1 Test materials and equipment regularly.<br>1.2 Monitor availability of new and used equipment.<br>1.3 Evaluate costs/benefits of replacing equipment, and recommend/implement the purchase/lease of replacement equipment.<br>1.4 Check stock levels and order spare parts/consumables in accordance with company procedure.<br>1.5 Maintain communication between operators, company and suppliers.<br>1.6 Check manufacturer's manuals/company procedures for currency and relevancy. |
| 2. Plan and organise maintenance and overhauls. | 2.1 Determine type and frequency of maintenance tasks.<br>2.2 Organise equipment maintenance and service to ensure availability is maintained and downtime minimised.<br>2.3 Monitor performance of maintenance schedules and take corrective action if necessary.<br>2.4 Arrange sources for obtaining back up or replacement equipment.<br>2.5 Allocate personnel to carry out maintenance tasks.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Ability to check and maintain stocks
- Ability to conduct a cost benefit analysis
- Ability to order equipment/consumables
- Ability to complete reports

### Required knowledge:

- Equipment and ancillary attachment characteristics, technical capabilities and limitation
- Wear parts and relative frequency of replacement
- Purpose of stock control
- Financial transactions (e.g. cash flow, cost benefit analysis)

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind



Working practices include:	<ul style="list-style-type: none"><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of H 2S and other toxic substances</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>
Cost items include:	<ul style="list-style-type: none"><li>• Plant equipment and hire</li><li>• Fuel, materials, drilling stores and bits</li><li>• Maintenance and drill string replacement</li></ul>
Methods for planning and scheduling tasks include the development of:	<ul style="list-style-type: none"><li>• Flow charts</li><li>• Time lines/diagrams</li><li>• Planned maintenance manuals</li></ul>
Methods of identifying spare parts and consumables include:	<ul style="list-style-type: none"><li>• Diagrams in makers' handbooks and other documents</li><li>• Lists in makers' handbooks and other documents</li><li>• Labels, bar codes etc, on items</li></ul>
Methods of maintaining appropriate stock levels include:	<ul style="list-style-type: none"><li>• Two bin system</li><li>• Re-order level system</li><li>• Re-order cycle system</li><li>• Any of the above operating with computer assistance</li><li>• Replenishment system</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Operational safety in compliance with appropriate legislation
- Designing and maintaining:
  - checklists of materials/spares
  - schedules/timelines for equipment maintenance
  - an effective stock control system
- Application of estimations and calculations of time/costs of repairing, replacing, servicing
- The ability to transfer the competency to changing circumstances

### Interdependent assessment of units

This unit may be assessed concurrently with other relevant units.

<b>Resource implications</b>	This unit requires access to an operating rig.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.
<b>Context of assessment</b>	Assessment should focus on evidence produced in the workplace.

## DRTOG35B

### Unit Descriptor

## Maintain man management systems

This unit covers the responsibilities in analysing the structure of man management and rig management practices in onshore/offshore drill rig installations.

### Employability Skills Application of the Unit

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG35A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector** Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |
|---|---|
| 1. Demonstrate sound leadership practices.          | 1.1 Apply company/site human resources strategies to crew members.<br>1.2 Recognise workplace accomplishments in accordance with company policies/procedures.<br>1.3 Develop operational protocols and convey to all crew members.<br>1.4 Counsel crew members relating to their operating status and family issues, as required.   |
| 2. Conduct on-site training.                        | 2.1 Induct crew into job requirements.<br>2.2 Identify, understand and document competency requirements of crews.<br>2.3 Identify knowledge/skills gaps and apply company strategies to rectify performance issues.<br>2.4 Undertake, review and rectify Job Safety Analyses (JSAs) and undertake appropriate training.<br>2.5 School crew members in relation to communication techniques between the team, management and the client. |
| 3. Employ effective work organisation and planning. | 3.1 Apply sound planning practices to operations, in accordance with government regulations and company policies/procedures.<br>3.2 Develop work schedules and communicate to crew.<br>3.3 Measure crew efficiencies and recognised and/or employ strategies to rectify performance issues.<br>3.4 Keep and maintain appropriate personnel records.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Communicate at all levels
- Lead team
- Problem solve
- Interpret instructions
- Coordinate personnel
- Conduct meetings
- Perform time management
- Plan in accordance with company requirements
- Conduct training and assessment

### Required knowledge:

- Different management techniques
- Cultural diversity
- Leadership styles
- Job Safety Analysis (JSA)
- Rig layout
- Company management structure and organisation charts
- Teaching/learning and assessment techniques

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details  
include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Training sessions

Statutory adherence  
include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Working practices include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H<sub>2</sub>S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Written records to be completed include:

- Worksheets
- Forms for orientation of new employees
- Employee evaluation forms
- Employee progress charts

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Effective spoken and/or written communication skills are demonstrated with a range of personnel and in a range of situations
- Leadership skills
- Problem solving
- Conflict resolution
- Negotiation skills
- Training and assessing skills
- Record keeping

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Underpinning knowledge**

## **Underpinning skills**

<b>Resource implications</b>	This unit requires access to a typical drilling workplace.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.
<b>Context of assessment</b>	Assessment should focus on evidence produced in the workplace.

## DRTOG36B

### Unit Descriptor

## Coordinate air drilling operations

This unit covers coordinating air drilling operations on an onshore drill rig installation.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Sector specific information:** This unit is sector specific.
- **Units replaced:** DRTOG36A
- **Links outside this Training Package:** Nil

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |
|---|---|
| 1. Determine correct drilling operations.   | 1.1 Identify, understand explain and apply air drilling concepts and methods, advantages and disadvantages in accordance with company/regulatory requirements.              |
|   | 1.2 Identify, understand explain and apply conventional mud drilling concepts and methods, advantages and disadvantages in accordance with company/regulatory requirements. |
|   | 1.3 Apply air drilling and conventional mud drilling techniques.  |
|   | 1.4 Apply Occupational Health and Safety and emergency procedures to air and conventional mud drilling.   |
| 2. Examine correct air drilling procedures. | 2.1 Describe and demonstrate Job Safety Analysis (JSA) for air drilling application.  |
|   | 2.2 Identify, explain and implement emergency response plan for air drilling operations.  |
|   | 2.3 Obtain, interpret and apply pre-tour and pre-drilling checklists.   |
|   | 2.4 Identify components that make up an air drilling package and explain their use to crew members.   |
|   | 2.5 Identify and apply parameters to watch during operations whilst air drilling.   |
|   | 2.6 Identify and secure crew numbers and expertise for air drilling operations.   |
|   | 2.7 Identify and confirm conditions required to initialise the drilling of new holes in accordance with company procedures.   |
|   | 2.8 Identify and explain test procedures to crew and carry out in accordance with company requirements.   |
|   | 2.9 Identify and explain tripping procedures to crew and apply in accordance with company requirements.   |
|   | 2.10 Determine and implement correct communications and record keeping procedures for air drilling operations.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Discuss and apply drilling concepts and methods
- Apply air drilling procedures
- Explain and describe the uses of air drilling package components
- Apply emergency response procedures
- Apply Job Safety Analysis (JSA)

### Required knowledge:

- Pressure volume requirements
- Air requirements
- Dust drilling
- Mist drilling
- Stiff foam drilling
- Aerated mud
- Air drilling procedures
- Emergency response
- Job Safety Analysis (JSA)

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet



Work conditions include:	<ul style="list-style-type: none"><li>• Night time operations</li><li>• Day time operations</li><li>• Potential for bushfires if flaring gas</li><li>• Hot climates</li><li>• Cold climates</li><li>• Wet weather conditions</li><li>• High wind</li></ul>
Working practices include but are not limited to:	<ul style="list-style-type: none"><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of H 2S and other toxic substances</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>
Documents to be read include:	<ul style="list-style-type: none"><li>• Daily pre-tour checklists</li><li>• Pre-drilling checklists</li></ul>
Records to be maintained include:	<ul style="list-style-type: none"><li>• Daily tour sheets</li></ul>
Calculations to be carried out include:	<ul style="list-style-type: none"><li>• Annular velocity</li><li>• Sinking/slipping velocity</li><li>• Pressure</li><li>• Flow test procedure</li><li>• Volume</li><li>• Conversion between metric and imperial</li><li>• Use of a calculator</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Accurate application of required calculations and measurements
- Ability to convert metric to imperial and vice versa
- Air drilling concepts and methods
- Mud drilling concepts and methods
- Emergency response and Job Safety Analysis (JSA)

### Interdependent assessment of units

This unit may be assessed concurrently with other relevant units.

<b>Resource implications</b>	This unit requires access to air drilling operations.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.
<b>Context of assessment</b>	Assessment should focus on evidence produced in the workplace.

## DRTOG37B

### Unit Descriptor

## Participate in, lead and facilitate work teams

This unit covers the responsibilities in onshore/offshore drill rig installations in leading, participating in, facilitating and empowering work teams/groups within the context of the organisation. This competency supports those who have a prominent part in motivating, mentoring, coaching and developing team members and in achieving team cohesion. This unit is based on BSXFM1404A, modified to suit industry needs.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG37A
- **Links outside this Training Package:** This unit is based on BSXFM1404A, modified to suit industry needs.

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| 1. Participate in team planning.            | 1.1 Establish clearly defined team purpose, roles, responsibilities and accountabilities within the organisation's goals and objectives.<br>1.2 Ensure the team performance plan contributes to the organisation's business plan, policies and practices.<br>1.3 Help the team agree to processes to monitor and adjust its performance within the organisation's continuous improvement policies.<br>1.4 Check the team includes in its plans ways in which it can benefit from the diversity of its membership.      |
| 2. Develop team commitment and cooperation. | 2.1 Use open communication processes to obtain and share information.<br>2.2 Encourage and exploit innovation and initiative.<br>2.3 Provide support to the team to develop mutual concern and camaraderie.  |
| 3. Manage and develop team performance.     | 3.1 Support the team in making decisions within its agreed roles and responsibilities.<br>3.2 Ensure the results achieved by the team contribute positively to the organisation's business plans.<br>3.3 Monitor team and individual competencies regularly to confirm that the team is able to achieve its goals.<br>3.4 Support team members by mentoring and coaching to enhance their knowledge and skills.<br>3.5 Monitor delegates' performance to confirm that they have completed their delegation/assignment. |

- |  |   |
|--|---|
| 4. Participate in and facilitate the work team | <ul style="list-style-type: none"><li>4.1 Encourage and enhance team effectiveness through active participation in team activities and communication processes.</li><li>4.2 Actively encourage individuals and teams to take individual and joint responsibility for their actions.</li><li>4.3 Use the diversity of individual's knowledge and skills to enhance team performance.</li><li>4.4 Support the team to identify and resolve problems which impede its performance.</li></ul> |
| 5. Record and report results                   | <ul style="list-style-type: none"><li>5.1 Prepare preliminary reports for management briefings.</li><li>5.2 Recognise the contribution of individuals and teams in achieving the planned results.</li><li>5.3 Make recommendations for improving the management of future processes/projects to individuals and teams.</li></ul>  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Rig operations, plant and equipment
- Team management/quality concepts
- Statutory/legal control compliance including Occupational Health and Safety/environment
- Organisational objectives, policies/procedures
- Industrial awards/enterprise agreements
- Customer/client relations
- Organisational change and development
- Computer applications
- Negotiation techniques
- Coaching techniques

### Required knowledge:

- Establish among team members a strong commitment to goals, strategies, outcomes and priorities
- Monitor and introduce processes to improve team plans and results
- Provide leadership to the team in varying contexts and situations
- Work effectively with team members who have diverse work styles, aspirations, cultures and perspective
- Communicate clearly and concisely with individuals and teams
- Encourage others in the team to openly propose, discuss and resolve issues
- Analyse problems and barriers to team participation, and develop appropriate strategies for team development
- Support team members to develop skills through teamwork
- Recognise, reward, and support achievements
- Deal with conflict before it adversely affects team performance
- Participate in internal and external environments to successfully influence decisions affecting the team
- Provide clear direction regarding the devolution of responsibility and accountability
- Provide constructive feedback to delegates to improve their performance
- Promote networking between teams for mutual benefit
- Use continuous improvement processes to enhance the quality of team performance
- Strive to achieve consensus in team decisions
- Recognise and minimise the language, literacy and numeracy barriers to team participation

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The team may be:

- On-going
- Project-based

The team operates within:	<ul style="list-style-type: none"> <li>• Small, medium and large contexts</li> <li>• Access and equity principles and practices</li> <li>• Appropriate goals, objectives and strategies</li> <li>• Best practice principles and practices</li> <li>• Agreed responsibility and accountability requirements</li> <li>• Complex internal and external environment</li> <li>• Resource parameters</li> </ul>
The team develops processes to gain feedback from:	<ul style="list-style-type: none"> <li>• Team members</li> <li>• Clients</li> <li>• Others within the organisation</li> </ul>
A variety of learning strategies including:	<ul style="list-style-type: none"> <li>• Informal and formal opportunities</li> <li>• Formal training programs</li> <li>• Work-based approaches</li> </ul>
Workplace conditions include:	<ul style="list-style-type: none"> <li>• Night time operations</li> <li>• Day time operations</li> <li>• Hot climates</li> <li>• Cold climates</li> <li>• Wet weather conditions</li> <li>• High wind</li> <li>• Isolated sites</li> </ul>
Records to be maintained include:	<ul style="list-style-type: none"> <li>• Daily tour reports</li> <li>• Requisition forms</li> <li>• Weekly reports of site activities</li> <li>• Occupational Health and Safety requirements</li> </ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects of evidence to be considered</b>	<p>It is essential that competence is fully observed in the critical aspects of:</p> <ul style="list-style-type: none"> <li>• Team-based work organisation principles and practices</li> <li>• Human resource management</li> <li>• Site resource capabilities</li> <li>• Organisational policies and procedures</li> </ul>
<b>Interdependent assessment of units</b>	<p>This unit may be assessed concurrently with other relevant units.</p>

<b>Resource implications</b>	This unit requires access to a typical drilling industry workplace.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.
<b>Context of assessment</b>	Assessment should focus on evidence produced in the workplace.

**DRTOG38B****Unit Descriptor****Employability Skills****Application of the Unit****Manage rig operations**

This unit covers the responsibilities in preparing rig operations on an onshore drill rig installation.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG38A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                               |   |
|-------------------------------|---|
| 1. Carry out rig preparation. | 1.1 Obtain copy of well program for next well from company representative or office prior to moving on to lease.<br>1.2 Read and interpret well program and check all necessary contractor-supplied equipment availability and rectify anomalies.<br>1.3 Check for casing discrepancies or obvious mistakes and take corrective action.<br>1.4 Liaise with company representative if changes are required to program.<br>1.5 Inform office of all required or possible changes to program.  |
| 2. Establish lease.           | 2.1 Obtain lease details and locate and inspect lease.<br>2.2 Inform construction company of lease details including all infrastructure arrangements.<br>2.3 Make contact with owners and statutory bodies to ensure compliance with regulations.<br>2.4 Establish, check and communicate directions to lease.<br>2.5 Establish right-of-way to lease, identify, rectify potential problems and communicate to appropriate personnel, third parties and regulators.<br>2.6 Establish camp location, check infrastructure/safety arrangements and rectify, if required.<br>2.7 Check supply sources and expendables and make adjustments, if required.<br>2.8 Establish medical aid and medivac procedures and communicate to personnel and appropriate authorities.<br>2.9 Organise camp supplies prior to camp set-up and make necessary arrangements for transporting of requisites, if required.<br>2.10 Put in place rubbish/waste disposal arrangements. |



- |                                     |  |
|-------------------------------------|--|
| 3. Communicate and report outcomes. | 3.1 Confirm lease establishment information with appropriate personnel, third parties and regulators and submit reports. |
|                                     | 3.2 Review, update and implement contract information for pre-well preparation.  |
|                                     | 3.3 Report new lease data to appropriate officers using correct reporting strategies.                                    |
|                                     | 3.4 Review and amended shut down procedures and if required communicated to relevant parties.                            |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Carry out and manage rig operations
- Communicate in written and verbal forms at all operating levels
- Plan and organise
- Work with others
- Solve logistic problems
- Establish and report new lease arrangements

### Required knowledge:

- Rig loading
- Spotting loads
- Rig up procedures
- Safety procedures
- Man management skills
- Lease preparation
- Logistics

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Well program
- Stacking procedure
- Start-up procedure (if rig was previously stacked )
- Outstanding orders (if rig was previously stacked )
- Occupational Health and Safety/environmental plan
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence includes:

- Road permits
- Environmental concerns
- Heritage concerns
- Operator environment plan
- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels include:

- Hand signals
- Telephone
- Public address system
- Computer
- Fax
- Face to face
- Written documentation
- Two way radio and radio network
- Satellite phones
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Rig and camp
- Trucks
- Vehicles
- Cranes/forklift/winch trucks
- Backhoe/digger

Operational instructions include:

- Start up procedures
- Safety procedures
- Medical contacts/emergency contacts
- Medivac etc.

Working practices include:

- Safe working practices
- Rig up procedures
- Working with trucks, cranes, winch trucks and forklift
- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Remedial action taken to deal with errors, omissions and shortages include:

- Consultation
- Minder system
- Warning letter
- Termination

Communication occurs between:

- Crew
- Management
- Construction company
- Operator's representative
- Company representative
- Suppliers
- Ambulance service
- Doctors/medicos

Records to be maintained include:

- Daily drilling report
- Equipment damage/failure report
- Material requisition form
- Plant movement advice
- Materials and services received (report)
- Gas bottle returns
- Third party hire and monthly stock lists
- Change over notes
- Employee time sheets
- Meal and bed sheet
- Fire extinguisher checklist
- Monthly tubular summary

Documents to be read and interpreted include:

- Company policy and procedure documents
- Legislation
- Operator's representative instructions
- Contracts
- Drilling program
- Shut down lists
- State and Territory Petroleum Acts
- Environmental Protection Act
- Site specific manuals
- Quality Assurance (QA) manual
- Transport manifest

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Rig moving
- Rig up
- Spudding
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Effective spoken and/or written communication skills are demonstrated with a range of personnel and in a range of situations

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Underpinning knowledge****Underpinning skills****Resource implications**

This unit requires access to an operating rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

**DRTOG39B****Unit Descriptor****Plan and evaluate rig operations**

This unit covers planning and evaluating onshore/offshore rig operations in line with Occupational Health and Safety legislation and environmental regulations. This competency supports promoting and monitoring of workplace practices.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG39A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Comply with legislative/company requirements. | 1.1 Receive and interpret State/Territory/Federal Petroleum Acts and implement appropriate policies/procedures for rig operations.<br>1.2 Examine, interpret and apply State/Territory/Federal Environmental Protection Acts to rig operations.<br>1.3 Identify financial/insurance implications of non-conformance and notify appropriate personnel/authorities.   |
| 2. Establish risk management strategies.         | 2.1 Identify role and legal responsibilities of rig managers, supervisors and personnel and put appropriate measures in place to manage such responsibilities.<br>2.2 Examine use of regulations, codes of practise and specific site manuals and implement appropriate processes.<br>2.3 Make arrangements to provide information in a language, style and format which is understood by all parties.<br>2.4 Understand audit of potential workplace hazards, evaluate findings and implement correct control measures and communicate to personnel and appropriate authorities.<br>2.5 Establish communication and on-site meeting processes for resolving safety issues and communicate to personnel and appropriate authorities.<br>2.6 Evaluate rig performance and discuss with client and review operational requirements and implement changes if required.<br>2.7 Identify and implement coaching and mentoring arrangements and design appropriate training strategies to rectify performance issues. |

- |  |   |
|--|---|
| 3. Implement rig safety compliance system. | 3.1 Identify and implement communication requirements and communicate to all parties.   |
|  | 3.2 Identify and demonstrate radio communication strategies and reporting techniques to all parties.                              |
|  | 3.3 Monitor, adjust and report health, safety and environmental performance to appropriate personnel/authorities.                 |
|  | 3.4 Maintain systems, records and reporting procedures in accordance with company and/or organisational/legislative requirements. |
|  | 3.5 Investigate non-conformances and report and deal with according to company and/or legislative requirements.                   |
|  | 3.6 Implement workplace measures to ensure that non-conformance is not repeated.  |

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

#### **Required skills:**

- Apply and monitor rig performance in line with regulatory requirements
- Communicate verbal and written instructions/outcomes at all operating levels
- Apply appropriate software applications
- Identify, assess, control and report hazards/situations
- Maintain monitoring systems
- Counsel personnel

#### **Required knowledge:**

- Petroleum Act
- Environmental Protection Act
- Occupational Health and Safety Act
- Confined space entry
- Investigation procedures
- Evaluation techniques
- Reporting techniques
- Monitoring systems

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Outstanding environmental incident reports
- Rig manager handover notes
- Permit to work register
- Safety review committee
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence includes:

- Occupational Health and Safety
- Environmental Protection Act
- Workcover
- Confined space entry legislation
- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Gas detection equipment
- Radio
- Satellite phone-up unit
- Satellite earth station
- Computer

Operational instruction include:	<ul style="list-style-type: none"><li>• Adhering to environmental plan</li><li>• Hazard identification</li></ul>
Working practices include:	<ul style="list-style-type: none"><li>• Hazard control and reporting</li><li>• Job task coordination</li><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of H 2S and other toxic substances</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>
Remedial action taken to deal with errors, omissions and shortages include:	<ul style="list-style-type: none"><li>• Corrective action request against a procedure</li><li>• Inclusion of errors, omissions and shortages in morning reports</li><li>• Direct communications with supervisor</li></ul>
Documents to be read and interpreted include:	<ul style="list-style-type: none"><li>• Occupational Health and Safety Legislation</li><li>• Codes and standards</li><li>• Company policies and procedures</li><li>• Organisational requirements</li><li>• Environmental management</li><li>• Risk management techniques/strategies</li><li>• Insurance policies</li><li>• Quality Assurance (QA) manual</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects of evidence to be considered</b>	<p>It is essential that competence is fully observed in the critical aspects of:</p> <ul style="list-style-type: none"><li>• Assess and rectify rig performance</li><li>• Knowledge of legislative framework and implementation strategies</li><li>• Productivity</li><li>• Effective spoken and/or written communication skills are demonstrated with a range of personnel and in a range of situations</li><li>• Safety record</li><li>• Implement, monitor, maintain and rectify non-conformance for Occupational Health and Safety and environmental management</li><li>• Risk management strategies</li><li>• Workplace hazard audit/reporting procedures</li></ul>
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<b>Interdependent assessment of units</b>	This unit may be assessed concurrently with other relevant units.
<b>Resource implications</b>	This unit requires access to an operational rig.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.
<b>Context of assessment</b>	Assessment should focus on evidence produced in the workplace.

**DRTOG40B****Unit Descriptor****Oversee drilling operations**

This unit covers the responsibility of overseeing drilling operations in offshore drill rig installations.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a sector specific unit.
- **Units replaced:** DRTOG40A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Organise drilling of surface hole.                                  | 1.1 Obtain copies of contract and well program, check and implement strategies designed and communicate to all parties.<br>1.2 Obtain and check correct equipment and tools are on hand for surface hole operations.<br>1.3 Check integrity of equipment and prepare/inspect casing and joints for damage.<br>1.4 Liaise with service companies to rectify faults.<br>1.5 Ensure that appropriate equipment and personnel are on hand for casing.   |
| 2. Supervise and participate in nipping up (N/U) and pressure testing. | 2.1 Organise equipment and nipping-up requirements for drilling out.<br>2.2 Ensure pressure testing of all BOP equipment is carried out.<br>2.3 Ensure rig up to drill out is carried out in accordance with procedure.<br>2.4 Monitor drill out safety processes and test gauge leak off as required.  |
| 3. Organise rig up and rig up to spud.                                 | 3.1 Assign crews to specific jobs and implement performance measures to monitor operations.<br>3.2 Put appropriate monitoring strategies and checks in place to ensure integrity of operations.<br>3.3 Check all specific instructions with operator's representative for drilling hole.<br>3.4 Conduct crew meetings on total rig safety requirements.<br>3.5 Report/rectify damage as required.<br>3.6 Ensure mud is mixed in accordance with procedures and properties defined in the drilling program.<br>3.7 Carry out pre-spud safety inspections with circulation and spud-in established.<br>3.8 Undertake surveys and report any deviations to operator's representative and record on appropriate documentation.<br>3.9 Supervise running in and cementing of casing with operator's written instructions being followed. |

- |                               |  |
|-------------------------------|--|
| 4. Complete and abandon well. | 4.1 Supervise completion and well abandonment with operator's representative.          |
|                               | 4.2 Make preparations to release rig and arrange shutdown preparation list.            |
|                               | 4.3 Arrange servicing, repair and/or return of equipment through appropriate channels. |
|                               | 4.4 Abandon well in accordance with legislative, operator and company requirements.    |

## **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

### **Required skills:**

- Apply BOP specifications
- Select and utilise correct drilling equipment
- Apply drilling specifications
- Apply legislation and acts
- Nipple-up and pressure test within specifications
- Rig up to spud
- Coordinate drill team
- Drill out of hole in accordance with procedures
- Abandon well activity to procedures

### **Required knowledge:**

- BOP specifications
- Casing tools and their applications
- Inspection and reporting procedures and practices
- Equipment types and uses
- Occupational Health and Safety/environmental obligations
- Nippling-up and pressure testing techniques
- Pressures
- Drill out procedures
- Testing
- Rig up to spud procedure
- Drilling programs
- Run in and cementing procedures
- Well abandonment and procedures

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to:
  - company
  - facility
  - client

Statutory adherence include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels may include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet/intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Working practices include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H<sub>2</sub>S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Communication occurs between:

- Crew
- Service companies
- Operator's representative

Records to be maintained include:

- Daily drilling report
- Equipment damage/failure report
- Material requisition form
- Plant movement advice
- Materials and services received (report)
- Gas bottle returns
- Third party hire and monthly stock lists
- Change over notes
- Employee time sheets
- Drilling rate sheet
- Meal and bed sheet
- Fire extinguisher checklist
- Monthly tubular summary

Range of numerical calculations/measurements include:

- Carrying out addition, subtraction, multiplication, division
- Relate normal pressure to temperature
- Using calculator if required
- Using estimated skills (e.g. mental arithmetic, visualisation of size and quantity)
- Basic geometry (e.g. interpreting depth, direction)
- Use of metric and imperials and conversion between the two
- Interpreting of gauges, graphs etc.

Calculations include:

- Pressure
  - hydrostatic
  - surface
  - downhole
  - circulating
- Density
- Volume
  - fluid
  - air
  - gas
- Height
- Velocity
- Length
- Weight

Measurements include:

- Penetration rate
- Rotary torque
- Rpm
- Pump pressure
- Relate normal pressure to temperature

Documents to be read and interpreted include:

- Standards
- Safety procedures
- Drilling program
- Operator's written instructions
- Company policy and procedure documents
- Legislation
- Operator's representative instructions
- Contracts
- Shut down lists
- State and Territory Petroleum Acts
- Environmental Protection Act
- Site specific manuals
- Quality Assurance (QA) manual
- Transport manifest

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Plan drilling operation
- Manage drilling team
- Coordinate drilling operation
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Effective communication skills in spoken and/or written form with a range of personnel are demonstrated
- Accurate application of all calculations and measurements
- Comply with statutory requirements
- Maintain records

### Interdependent assessment of units

This unit may be assessed concurrently with other relevant units.

### Resource implications

This unit requires access to an operating rig.

### Consistency in performance

Evidence should be available of the ability to perform this competency under a range of conditions.

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

**DRTOG41B****Unit Descriptor****Employability Skills****Application of the Unit****Manage drilling operations**

This unit covers the responsibility in managing drilling operations in an onshore drill rig installation.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG41A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Implement drill management strategies.             | 1.1 Obtain and check copies of contract and well program, design implementation strategies and communicate to all parties.<br>1.2 Prepare daily drilling reports and tour sheets and communicate to all parties.<br>1.3 Undertake inspections of operating site and camp and record/ report.<br>1.4 Establish communication strategies and confirm with operator's representative.<br>1.5 Review and confirm legislative/company requirements and communicate to appropriate personnel.<br>1.6 Put appropriate reporting mechanisms in place.<br>1.7 Establish rig maintenance arrangements and communicate to all parties.   |
| 2. Manage Occupational Health and Safety obligations. | 2.1 Put in place and carry out crew meeting arrangements, minute outcomes and report to appropriate officers.<br>2.2 Establish, implement, monitor and record/report safety inspection strategies.<br>2.3 Induct new employees into site operations and put appropriate monitoring strategies in place.<br>2.4 Establish, implement, monitor and record/report permit-to-work systems.<br>2.5 Identify and implement emergency response arrangements and communicate to all parties.<br>2.6 Identify, implement and monitor environmental legislative/ company requirements and rectify/report in accordance with procedures.<br>2.7 Identify, rectify and report non-conformances to appropriate authorities/officers. |

- |                                |   |
|--------------------------------|---|
| 3. Oversee drilling operations | 3.1 Obtain and check drill program and communicate to appropriate officers/personnel.   |
|                                | 3.2 Organise drilling tools and equipment and put appropriate checking processes in place.  |
|                                | 3.3 Put in and monitor appropriate reporting mechanisms.  |
|                                | 3.4 Assess safe work practices and adherence to drilling instructions and rectify if required.  |
|                                | 3.5 Implement, maintain and monitor well control and blowout prevention strategies and report in accordance with legislative/ company requirements. |
|                                | 3.6 Carry out and monitor appropriate tests and report.   |

### **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

#### **Required skills:**

- Manage rig operation and performance
- Communicate at all levels of operations
- Identify, assess, control and report hazards/situations
- Control downhole problems
- Coordinate and delegate
- Apply Occupational Health and Safety/Environmental Regulations
- Budget and monitor operating costs

#### **Required knowledge:**

- Document control
- Operational procedures
- Legislative requirements
- Maintenance
- Safety
- Well control
- Downhole problems and solutions



## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Rig manager change over notes
- Safety briefing/induction
- Morning reports
- Pre-tour safety meeting
- Pre-spud meetings
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence includes:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures
- Occupational Health and Safety
- Environmental Protection Act
- Workplace Relations Act
- Compliance with terms and conditions of union awards

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Drilling rig inventory
- Ancillary equipment (e.g. cranes, forklifts)

Operational instructions include:

- Issues highlighted in pre-spud safety inspector
- Aspects of drilling program that detail contractor liability
- Drilling parameters
- Maintenance requirements

Working practices include:

- Employee mentoring
- Driller training
- Ongoing supervisor for hazard identification
- Close surveillance of new employees
- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Remedial action taken to deal with errors, omissions and shortages include:

- Corrective action request to head office
- Warning and counselling sessions

Communication occurs between:

- Crew
- Service companies
- Operator's representative

Records to be maintained include:

- Daily drilling report
- Equipment damage/failure report
- Material requisition form
- Plant movement advice
- Materials and services received (report)
- Gas bottle returns
- Third party hire and monthly stock lists
- Change over notes
- Employee time sheets
- Drilling rate sheet
- Meal and bed sheet
- Fire extinguisher checklist
- Monthly tubular summary

Range of numerical calculations/measurements include:

- Carrying out addition, subtraction, multiplication, division
- Relate normal pressure to temperature
- Using calculator if required
- Using estimated skills (e.g. mental arithmetic, visualisation of size and quantity)
- Basic geometry (e.g. interpreting depth, direction)
- Use of metric and imperials and conversion between the two
- Interpreting of gauges, graphs etc.

Calculations include:

- Pressure
  - hydrostatic
  - surface
  - downhole
  - circulating
- Density
- Volume
  - fluid
  - air
  - gas
- Height
- Velocity
- Length
- Weight

Measurements include:

- Penetration rate
- Rotary torque
- RPM
- Pump pressure
- Relate normal pressure to temperature

Documents to be read and interpreted include:

- Standards
- Safety procedures
- Drilling program
- Operator's written instructions
- Company policy and procedure documents
- Legislation
- Operator's representative instructions
- Contracts
- Shut down lists
- State and Territory Petroleum Acts
- Environmental Protection Act
- Site specific manuals
- Quality Assurance (QA) manual
- Transport manifest

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- General rig operation and performance
- Safety records and Occupational Health and Safety permit-to-work procedures including inspections
- Running costs
- Employee turn over
- Ability to complete required documentation legibly, accurately and within the specified time frame
- Effective communication skills in spoken and/or written form with a range of personnel
- Accurate application of all calculations and measurements
- Legislation/company procedures
- Well control

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to a drilling operation.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

**DRTOG42B****Unit Descriptor****Employability Skills****Application of the Unit****Manage drilling induction and orientation**

This unit covers carrying out drilling induction and orientation on onshore and offshore drill rig installations.

This unit contains employability skills.

- **Sector specific information:** This is a core unit.
- **Units replaced:** DRTOG42A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Examine general safety practices.                      | 1.1 Obtain and review policies/procedures in relation to alcohol, drugs and firearms/weapons and communicate to all parties.<br>1.2 Develop chain of command and communication strategies and communicate to all parties.<br>1.3 Put hazard identification, reporting and recording mechanisms in place and communicate requirements to all parties.<br>1.4 Assess personal protective equipment and procedures and put procedures in place to communicate and monitor adherence to legislative/company requirements.<br>1.5 Identify hazardous materials handling and transport arrangements and establish and communicate procedures to manage and prevent uncontrolled/unauthorised release.<br>1.6 Put hazardous energy control and fire safety procedures in place and communicate responsibilities to all parties.<br>1.7 Identify mechanical equipment and manual handling hazard control measures and establish and communicate procedures to avoid non-conformance.<br>1.8 Discuss rig working and living conditions including work rosters and camp rules. |
| 2. Communicate First Aid/emergency response arrangements. | 2.1 Identify first aid requirements and discuss with all parties.<br>2.2 Identify and highlight dangers associated with the use of first aid applications.<br>2.3 Identify blood borne pathogens and precautions to identify contamination and convey to all parties.<br>2.4 Identify different types of alarms, their uses and authorisations and communicate to all parties.   |

**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required skills:**

- Verbal and written communication
- Accurate reporting
- Safely operate drilling rig (e.g. stand in for driller)
- Show leadership in critical situations

**Required knowledge:**

- All operational procedures (safe practice)
- Award entitlements (e.g. overtime)
- Safe working practice
- Man management skills
- Company reporting procedures
- General mechanical/electrical operating functions
- Down-hole problems and solutions
- Drills (e.g. fire, BOP, gas detection)

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Names of inductees
- Level of induction (e.g. experienced or green hands)
- Presentation aids-
  - signs
  - schematics
  - videos etc.
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client

Statutory adherence include:

- Knowledge of employee responsibility levels
- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li><li>• Internet and intranet</li></ul>
Work conditions include:	<ul style="list-style-type: none"><li>• Night time operations</li><li>• Day time operations</li><li>• Hot climates</li><li>• Cold climates</li><li>• Wet weather conditions</li><li>• High wind</li></ul>
Equipment includes:	<ul style="list-style-type: none"><li>• Protective clothing</li><li>• Hazardous material samples</li><li>• Respiration equipment</li><li>• Signs</li><li>• Rig layout schematic</li></ul>
Operational instructions include:	<ul style="list-style-type: none"><li>• Where to go in an emergency - muster points</li><li>• Acceptable smoking area</li><li>• Out of bounds areas (e.g. SCR shack)</li></ul>
Working practices include:	<ul style="list-style-type: none"><li>• Safe practice</li><li>• 12 hour shifts</li><li>• 14 day/21 day roster</li><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of H 2S and other toxic substances</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>
Remedial action taken to deal with errors, omissions and shortages include:	<ul style="list-style-type: none"><li>• Consultation</li><li>• Minder system</li><li>• Warning letter</li><li>• Termination</li></ul>
Records to be maintained include:	<ul style="list-style-type: none"><li>• Location arrival procedures</li><li>• Work permits</li><li>• Trip (vehicle) report</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Company/regulatory induction requirements
- Effective spoken and/or written communication skills are demonstrated with a range of personnel and in a range of situations
- Witnesses
- Company policies/procedures
- Clear reporting (verbal and written)
- Occupational Health and Safety procedures and practices
- Emergency response and alarm systems
- Drill operator's assessment

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to an operational drill rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency with a range of people and situations.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.



## DRTOG43B

### Unit Descriptor

#### Employability Skills

#### Application of the Unit

## Manage rig move and camp move

This unit covers the responsibility in organising rig move and camp move of an onshore drill rig installation.

This unit contains employability skills.

- **Units replaced:** DRTOG43A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

#### Unit Sector

Oil and Gas

#### ELEMENT

#### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1. Establish rig removal arrangements. | 1.1 Check and confirm drill rig movement and new location arrangements with company officers.<br>1.2 Make arrangements to gain statutory/local authority permission to move site.<br>1.3 Establish and follow a checklist of removal arrangements.<br>1.4 Make arrangements with transport company for rig removal.<br>1.5 Check right-of-way to new lease and confirm with appropriate parties.<br>1.6 Conduct pre-rig move safety meetings to ensure safe operation. |
| 2. Load out and move.                  | 2.1 Confirm transport arrangements and directions to new lease.<br>2.2 Apply correct rigging practices for rig removal and loading.<br>2.3 Brief crews, assign specific tasks and monitor operations.<br>2.4 Monitor rig/camp move and complete and forward reports to appropriate parties.  |

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required skills:

- Interact at all levels
- Prioritise
- Plan
- Problem solve
- Time management
- Read a map

#### Required knowledge:

- Work safe practices
- Rigging and slinging
- Rig and camp layouts
- Environmental concerns

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Rig and camp load lists
- Order of rig move
- Distance and road conditions
- Issues of concern if power line, bridges
- Weather conditions
- Time frames
- Securing of loads
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence includes:

- Occupational Health and Safety
- Oversize permits
- State road rules and regulations
- Weight loading
- Environment
- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:	<ul style="list-style-type: none"><li>• Mounted trailers</li><li>• Cranes</li><li>• Forklifts</li><li>• Water/fuel trucks</li><li>• Waste disposal trucks</li><li>• Maps</li><li>• Signage</li></ul>
Operational instructions include:	<ul style="list-style-type: none"><li>• Company policies and procedures</li><li>• Truck company procedures</li><li>• Job Safety Analysis (JSA)</li><li>• Hazard sheets</li><li>• Materials Safety Data Sheets (MSDS)</li></ul>
Working practices included:	<ul style="list-style-type: none"><li>• Pre-job safety meeting</li><li>• Check of lifting equipment</li><li>• Wearing of personal protective equipment</li><li>• Sequence of loads</li><li>• Team operations</li><li>• Maintain communication</li><li>• Statutory requirements</li><li>• Road rules</li></ul>
Communication occurs between:	<ul style="list-style-type: none"><li>• Crew</li><li>• Transport company</li><li>• Relevant statutory or local authorities</li><li>• Company personnel</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects of evidence to be considered</b>	<ul style="list-style-type: none"><li>• Effective spoken and/or written communication skills are demonstrated with a range of personnel and in a range of situations</li><li>• Legislation/Acts</li><li>• Lease locations</li><li>• Transport arrangements</li></ul>
<b>Interdependent assessment of units</b>	This unit may be assessed concurrently with other relevant units.
<b>Resource implications</b>	This unit requires access to a rig/camp move situation.
<b>Consistency in performance</b>	Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced as a result of rig/camp moves.

**DRTOG44B****Manage and monitor rig-up and rig-up to spud operations****Unit Descriptor**

This unit covers the responsibility in organising a rig up and rig up to spud on an onshore drill rig installation.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This unit is sector specific.
- **Units replaced:** DRTOG44A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                         |  |
|-------------------------|--|
| 1. Commence operations. | 1.1 Assess rig-up and rig-up to spud program and confirm details.<br>1.2 Identify number and expertise of personnel required and obtained.<br>1.3 Assign crews tasks and supervise performance.<br>1.4 Assess safety requirements and communicate to all parties.<br>1.5 Undertake equipment checks and rectify/report faults in accordance with legislative/company requirements.<br>1.6 Establish rig/lease drainage and effluent disposal.<br>1.7 Supervise spotting and rig assembly and rectify performance issues.<br>1.8 Arrange and supervise engine power start-up. |
| 2. Prepare to spud.     | 2.1 Supervise installation of rathole, mousehole and conductor pipe, if required.<br>2.2 Reinforce mud preparation and environmental requirements with crewmembers.<br>2.3 Confirm circulation and rig-up are with crew.<br>2.4 Undertake pre-spud safety inspection and confirm with crew to ensure compliance with regulatory/company requirements.  |

- |                                       |  |
|---------------------------------------|--|
| 3. Conduct pipe installation/mix mud. | 3.1 Complete tour sheet incorporating depth of auguring, monitor drilling/auguring processes and identify/report problems. |
|                                       | 3.2 Assess availability of correct casing and casing tools and rectify for anomalies.                                      |
|                                       | 3.3 Establish flowline and conductor pipe requirements and put in place.   |
|                                       | 3.4 Check and approve integrity of cement for application, to guard against washout.                                       |
|                                       | 3.5 Supervise N/U flowline and operations.   |
|                                       | 3.6 Establish and monitor circulation and spud in.   |
|                                       | 3.7 Check mud mixing procedures and properties against drilling program and confirm with crew.                             |
|                                       | 3.8 Record operating outcomes and report to appropriate officers.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Operate rig components
- Oversee forklift operations
- Use satellite or ground communication
- Issue permits and work orders
- Organise work teams into efficient working units
- Dog a crane and secure rigging
- Troubleshoot breakdowns

### Required knowledge:

- Rig-up procedures
- Rigging and dogging practices
- Auxiliary equipment functions and service requirements
- Specific auxiliary rig-up sequence
- Safety and environmental issues
- Communication equipment
- Emergency procedures
- Preventative maintenance
- Workplace relations and award conditions

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Pre-start safety meetings prior to commencement of each work day
- Delegation of work responsibilities to various teams
- Priority given to tasks if necessary
- Emergency services contacted to inform of new location and approximate period of occupancy
- Drilling program
- Smoking restrictions
- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include but are not limited to-
  - company
  - facility
  - client

Statutory adherence include:

- Occupational Health and Safety
- Environmental protection
- Permit to work
- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Company policies and procedures

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Cranes
- Front-end loaders using bucket or forks
- Winch trucks
- Prime movers with trailers and dog trailers
- Carrier mounted rigs and service units

Operational instructions include:

- Safety procedures
- Environmental considerations
- Completion sequence
- Well head preparation
- Preparation and inspection of loading slings and chains
- Material availability if maintenance, servicing or repair is to occur

Working practices include:

- Permit to work systems
- Safety meetings and Job Safety Analysis (JSA)
- Safety harnesses to be worn aloft during rig down
- No smoking
- Correct dogging practices
- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H 2S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Remedial action taken to deal with errors, omissions and shortages may include:

- Review specific Job Safety Analysis (JSA)
- Submit a Corrective Action Request (CAR) against a procedure (if applicable to TQMS)
- Notify immediate supervisor for advice or authorisation if problem outside of jurisdiction
- Adhere to company emergency response flowchart if dealing with safety or environmental issues

Documents to be read include:

- Operator's representative's instructions

Safety checklist for start-up records to be completed include:

- Tour book
- Request of materials received
- Transport manifests



## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Accuracy in adhering to the operators wishes as outlines in the drilling program
- Forward planning
- Logistical preparation
- Hazard identification
- Communications
- Rig-up schedule correlated company procedures and drilling program
- Safety
- Rig performance

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to an operational rig.

**Consistency in performance**

Evidence should be available of the ability to perform this competency under a range of conditions.

**Context of assessment**

Assessment should focus on evidence produced in the workplace.

**DRTOG45B****Unit Descriptor****Employability Skills****Application of the Unit****Manage well completion and abandonment**

This unit covers responsibility for completing and abandoning wells on onshore drill rig installation.

This unit contains employability skills.

- **Sector specific information:** This unit is sector specific.
- **Units replaced:** DRTOG45A
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                  |   |
|----------------------------------|---|
| 1. Organise completion schedule. | 1.1 Develop completion schedule in line with drilling contract and well prognosis.<br>1.2 Review and confirm lease details, as necessary notifications are forwarded to statutory, company, owner and contractor representatives.<br>1.3 Make preparations for release of rig and complete tourbook records in accordance with statutory and company requirements.<br>1.4 Ensure that prior to rig move, arrangements are in place for work orders and invoicing in line with contract requirements and servicing/maintenance repairs of equipment.   |
| 2. Complete well abandonment.    | 2.1 Make preparations to stack and move and communicate to all parties.<br>2.2 Assess environmental plan and that mud drilling fluids and waste storage/disposal requirements and correct records are completed and processed.<br>2.3 Prepare shutdown list in accordance with statutory/company requirements and distribute to crew for actioning.<br>2.4 Rig down in accordance with statutory/company requirements and distribute to crew for actioning.<br>2.5 Rig down in accordance with statutory/company requirements and ensuring that equipment, camp and rig are secured for removal.<br>2.6 Review contract requirements, complete records and forward to appropriate officers. |

**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

**Required skills:**

- Operate rig components
- Oversee forklift operations
- Use satellite or ground communication
- Issue permits and work orders
- Organise work teams into efficient working units
- Dog a crane and secure rigging
- Troubleshoot breakdowns

**Required knowledge:**

- Well completion or abandonment procedures
- Rigging and dogging practices
- Auxiliary equipment functions and service requirements
- Specific rig tear-out sequence
- Road haulage regulations
- Safety and environmental issues
- Communication equipment
- Emergency procedures
- Preventative maintenance
- Workplace relations and award conditions

**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Briefings/handover details include:

- Pre-start safety meetings prior to commencement of each work day
- Delegation of work responsibilities to various teams re-load-out or rig-up
- Set route for rig move
- Emergency procedures to follow if lost or disabled
- Road conditions
- New location whereabouts and access
- Name of property owners (where applicable)

Statutory adherence include:

- Licence check for all designated drivers
- Load permits
- Decontamination certificates if moving between quarantine areas

Communication channels include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions
- Internet and intranet

Work conditions include:

- Night time operations
- Day time operations
- Hot climates
- Cold climates
- Wet weather conditions
- High wind

Equipment includes:

- Cranes
- Front-end loaders using bucket or forks
- Winch trucks
- Prime movers with trailers and dog trailers
- Carrier mounted rigs and service units

Operational instructions include:

- Safety procedures
- Environmental considerations
- Completion sequence
- Well head preparation
- Preparation and inspection of loading slings and chains
- Material availability if maintenance, servicing or repair is to occur

Working practices include, but are not limited to:

- Permit to work systems
- Safety meetings and Job Safety Analysis (JSA)
- Safety harnesses to be worn aloft during rig down
- No smoking
- Correct dogging practices

Remedial action taken to deal with errors, omissions and shortages may include:

- Review specific Job Safety Analysis (JSA)
- Submit a Corrective Action Request (CAR) against a procedure (if applicable to TQMS)
- Notify immediate supervisor for advice or authorisation if problem outside of jurisdiction
- Adhere to company emergency response flowchart if dealing with safety or environmental issues

Documents to be read include:

- Operator's representative's instructions
- Checklist for shut down

Records to be completed include:

- Tour book
- Request of materials received
- Transport manifests

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Accuracy in adhering to the operators wishes as outlines in the drilling program
- Forward planning
- Logistical preparation
- Hazard identification
- Communications
- Completion schedule correlated against well prognosis and drilling program
- Loadout sequence observed for signs of "double handling"

**Interdependent assessment of units**

This unit may be assessed concurrently with other relevant units.

**Resource implications**

This unit requires access to a well completion/abandonment activity.

**Consistency in performance**

While it may not be appropriate to collect evidence from a range of completion/ abandonment activities, evidence should be obtained which would indicate the ability to handle completion/abandonment under a range of conditions. This may require the use of scenarios and 'what ifs' as part of the assessment.

**Context of assessment**

Evidence will include at least one actual completion/abandonment activity with supplementary evidence being based on real completion/abandonment scenarios.

**DRTOG52B****Implement and maintain statutory/legal compliance system****Unit Descriptor**

This unit covers the implementation and maintenance of the organisation's statutory/ legal compliance policies, procedures and programs in the relevant work areas.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a core unit.
- **Links to other units:** None

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Provide information about statutory/legal compliance and the organisation's policies.   | 1.1 Explain relevant provisions of legislation and codes of practice accurately and clearly to site supervisors.<br>1.2 Explain information on the organisation's policies, procedures and programs accurately and clearly to the group.  |
| 2. Manage organisation's procedures for treating compliance.                               | 2.1 Implement work procedures to treat compliance and monitor adherence in accordance with workplace procedures.<br>2.2 Monitor existing compliance treatment measures and report results regularly in accordance with workplace procedures.<br>2.3 Identify inadequacies in resource allocation for implementation of compliance measures and reported to designated personnel.<br>2.4 Ensure all members of the work group have an opportunity to contribute to issues in accordance with organisational procedures for consultation.<br>2.5 Deal with issues raised through consultation and resolve promptly or refer to the appropriate personnel for resolution in accordance with workplace procedures.<br>2.6 Make known outcomes of consultation over issues to the work group promptly. |
| 3. Manage organisation's procedures for identifying potential and existing non-compliance. | 3.1 Identify inadequacies in existing compliance measures and report to designated personnel in a timely way.<br>3.2 Evaluate information about potential non-compliance and explain treatment procedures clearly and accurately to the group.<br>3.3 Identify existing and potential non-compliance in the work area and report so that assessment and treatment procedures can be applied.<br>3.4 Implement measures to prevent recurrence and minimise non-compliance or alternatively refer to designated personnel for implementation.   |

- |  |  |
|--|--|
| 4. Implement and monitor procedures for providing statutory/legal compliance training. | 4.1 Identify training needs for work group members accurately.   |
|  | 4.2 Develop and implement training programs to fulfil employees' statutory/legal compliance training needs as part of the organisation's general training program. |
|  | 4.3 Carry out appropriate statutory/legal compliance training programs on and/or off the job in consultation with relevant parties.                                |
| 5. Implement and monitor procedure for maintaining statutory/legal records.            | 5.1 Complete records for work area accurately and legibly in accordance with workplace legal requirements.   |
|  | 5.2 Use aggregate information from the work area's records to identify non-compliance.   |
|  | 5.3 Use systems for reporting maintenance of statutory/legal compliance which are in place.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

The ability to:

- Develop and maintain statutory/legal and organisational procedures and policies
- Use effective consultative mechanisms to negotiate processes and procedures appropriate to statutory/legal requirements
- Explain complex information to superiors/subordinates
- Provide coaching and mentoring support
- Read, interpret and apply legislation

### Required knowledge:

A knowledge of:

- Legal rights and responsibilities
- Statutory/legal control
- Environmental management
- Work procedure/instruction writing
- Human resource management
- Company policy
- Insurance requirements
- Contractual rights and responsibilities
- Organisational reporting structures and record keeping duties and systems

## RANGE STATEMENT

This competency standard is applicable for those with managerial responsibilities. This would typically be an Operations Manager.

To be exhibited in the work area of responsibility which would typically be in the office but may include site work areas.

Involves application of relevant legislation and codes of practice, and the maintenance of records, provision of information and training and dealing with committees, statutory/legal agencies and site personnel.

Processes for consultation include committees, consultation with statutory/legal agencies/site representatives, issue resolution procedures and participative/consultative procedures conducted by supervisory staff within the area of managerial responsibility.

Monitoring of activities may include review of written reports, performance appraisal or auditing procedures.

Statutory/legal compliance may include but is not limited to:

- Licensing requirements
- Duty of care
- Australian Standards/ISO
- Occupational health and safety/environmental

In accordance with all relevant statutory/legal requirements, particularly:

- Requirements for the maintenance of records of statutory/legal breaches
- Provision of information and training
- Regulations and codes of practice relating to statutory/legal compliance
- Site representatives and committees
- Issue resolution

Statutory and regulatory requirements may include local, state, national and/or international legislation:

- Business registration
- Licence to practice
- Industrial
- Fire
- Taxation
- Occupational health and safety/environmental
- Superannuation

Legal documentation may include:

- Partnership agreement
- Insurance
- Constitution documents
- Acts
- Statutory books for companies
- Tender documents
- Financial documentation



Managers operate within:

- Work schedules which may include shift work and varying hours of duty
- Environments ranging from simple to complex and diverse
- Appropriate policies, guidelines and processes
- A level of autonomy which may range from limited to substantial
- Quality and continuous improvement processes and standards
- Business and performance plans
- Ethical standards established by the organisation
- Productivity and profitability objectives and targets
- Best practice and benchmarking principles and practices
- Legislation, codes and practices
- Resource parameters which may be defined or negotiated
- Training and development principles and practices
- Human resource policies and practices including interviewing, counselling, dispute settling and discipline
- Financial accountability including profit and loss statements
- Enterprise/industrial agreements/awards

Managers may assume varying roles including:

- Leader
- Coach
- Facilitator
- Mentor
- Participant
- Director
- Trainer
- Assessor

Managers will typically make decisions to:

- Maintain statutory/legal compliance
- Influence operational performance
- Plan production schedules
- Maximise production and minimise operating costs/risks and non-conformances
- Analyse and review market/production predictions and costs
- Manage projects and tasks

Resources may include:

- Acts
- Legislation/regulations
- Information
- Common law

Negotiations may be with a variety of internal or external sources and be:

- Formal or informal
- Short term or ongoing
- Multi-lingual and cross-cultural
- Enterprise agreements
- Legislation regulation compliance

Consultation would typically include:

- Regulatory authorities
- Tenderers
- Project managers
- Contractors
- Employees
- Community
- Customers
- Suppliers

Record keeping may include:

- Statutory/legal records
- Training needs
- Resource allocation
- Occupational health and safety
- Financial
- Personnel
- Taxation

Documentation to be read may include:

- Legislation
- Codes of practice
- Organisation's policies/procedures
- Statutory and regulatory requirements
- Legal compliance

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Rig operations
- Statutory/legal compliance
- Procedure/work instruction development
- Appraisal and auditing procedures
- Acts

### **Interdependent assessment of units**

Assessment of this unit may need to be considered in line with operational requirements. Co-assessment may occur with other units.

<b>Resource implications</b>	The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.
<b>Consistency in performance</b>	Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that the compliance systems have been implemented and maintained.
<b>Context of assessment</b>	<p>Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.</p> <p>Where this is not practical, this unit may also be assessed by use of projects, workplace based assignments and other appropriate mechanisms which simulate a workplace environment.</p>

**DRTOG53B****Implement and maintain occupational health and safety/environmental site risk management processes****Unit Descriptor**

This unit covers the responsibilities in implementing and maintaining the organization's risk management, occupational health and safety/environmental policies, procedures and programs.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Sector specific information:** This is a core unit.
- **Links to other units:** None

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |  |
|--|--|
| 1. Provide information about occupational health and safety/environmental policies, procedures and programs. | 1.1 Explain relevant occupational health and safety/environmental legislation and codes of practice accurately and clearly to site management.<br>1.2 Provide and clearly explain information about identified hazards, outcomes of risk assessment, risk minimisation and control procedures regularly and accurately to the work group.  |
| 2. Manage the occupational health and safety/environmental systems.  | 2.1 Implement and monitor consultation procedures for occupational health and safety/ environmental issues to ensure that all members of the work group have the opportunity to contribute.<br>2.2 Deal with issues raised through consultation and resolve promptly or refer to the appropriate personnel.<br>2.3 Make known outcomes of consultation to the work group promptly.   |
| 3. Develop and maintain procedures for control, minimisation and/or elimination of risks.                    | 3.1 Develop, implement and monitor work procedures to control risks.<br>3.2 Monitor existing risk minimisation and control measures and report results regularly in accordance with workplace procedures.<br>3.3 Identify inadequacies in existing risk minimisation and control measures and report to designated personnel.<br>3.4 Identify inadequacies in resource allocation for implementation of risk minimisation and control measures and report to designated personnel. |

- |  |   |
|--|---|
| 4. Establish the organisation's site procedures for dealing with hazardous events.                   | 4.1 Implement workplace procedures for dealing with hazardous events in line with company procedures.<br>4.2 Report existing and potential hazards in the work area so that risk assessment and risk minimisation and control procedures can be applied.<br>4.3 Investigate hazardous events to identify their cause in accordance with investigation procedures.<br>4.4 Implement control measures to prevent recurrence and minimise risks of hazardous events. |
| 5. Implement and maintain the organisation's occupational health and safety/ environmental training. | 5.1 Identify occupational health and safety/environmental training needs accurately.<br>5.2 Make arrangements for the delivery of occupational health and safety/environmental training in consultation with relevant parties.  |
| 6. Establish and maintain an occupational health and safety/environmental record system.             | 6.1 Complete occupational health and safety/environmental records accurately and legibly in accordance with workplace requirements.<br>6.2 Use aggregate information from the occupational health and safety/environmental records to identify hazards and monitor risk minimisation and control procedures within work area.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

The ability to:

- Develop and maintain statutory/legal and organisational procedures
- Develop and introduce practices to improve the work environment
- Use effective consultative mechanisms to negotiate processes and procedures appropriate to workplace and environmental safety
- Explain complex information to superiors/subordinates
- Provide coaching and mentoring support
- Audit occupational health and safety/environmental systems and recommend strategies for improvement

### Required knowledge:

A knowledge of:

- Statutory/legal control
- Occupational health and safety auditing
- Environmental legislation
- Environmental management
- Environmental auditing

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Management operates within:

- Work schedules which may include shift work and varying hours of duty
- Environments ranging from simple to complex and diverse
- Appropriate policies, guidelines and processes
- A level of autonomy which may range from limited to substantial
- Quality and continuous improvement processes and standards
- Business and performance plans
- Ethical standards established by the organisation
- Productivity and profitability objectives and targets
- Best practice and benchmarking principles and practices
- Legislation, codes and practices
- Resource parameters which may be defined or negotiated
- Training and development principles and practices
- A continuous improvement environment
- Human resource policies and practices including interviewing, counselling, dispute settling and discipline
- Enterprise/industrial agreements/awards

Management may assume varying roles including:

- Leader
- Coach
- Facilitator
- Mentor
- Participant
- Director
- Trainer
- Assessor

Management will typically make decisions to:

- Legislative application
- Influence operational performance
- Plan production schedules
- Maximise production and minimise operating costs, safety and environmental risks
- Manage projects and tasks
- Coordinate resources - human, financial and physical

Resources may include:	<ul style="list-style-type: none"><li>• People</li><li>• Finance</li><li>• Equipment/technology</li><li>• Water</li><li>• Buildings/facilities</li><li>• Information</li><li>• Minerals</li><li>• Legislation</li></ul>
Negotiations may be with a variety of internal or external sources and be:	<ul style="list-style-type: none"><li>• Formal or informal</li><li>• Short term or ongoing</li><li>• Multilingual and cross-cultural</li><li>• Enterprise agreements</li><li>• Legislative/regulative compliance</li></ul>
Consultation would typically include:	<ul style="list-style-type: none"><li>• Company senior management</li><li>• Regulatory authorities</li><li>• Tenderers</li><li>• Contractors</li><li>• Employees</li><li>• Community</li><li>• Customers</li><li>• Suppliers</li></ul>
Documentation to be read may include:	<ul style="list-style-type: none"><li>• Occupational Health and Safety legislation</li><li>• Environmental legislation</li><li>• Organisation's policies/procedures</li><li>• Risk assessment and procedures</li></ul>
Other skills that may be required include:	<ul style="list-style-type: none"><li>• Training and assessment skills</li><li>• Meeting skills</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Rig operations
- Statutory/legal compliance
- Policy/procedure development
- Occupational health and safety and environmental systems
- Continuous improvement processes
- Appraisal and auditing procedures
- Risk management
- Acts

**Interdependent assessment of units**

Assessment of this unit may need to be considered in line with:

- DRTNHB50A Manage business operations
- DRTNHB51A Manage human resources

**Resource implications**

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that risk management processes are implemented and maintained.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects, workplace based assignments and other appropriate mechanisms which simulate a workplace environment.



## DRTOG54B

### Unit Descriptor

## Manage multiple drilling operations

This unit covers the responsibilities in planning, implementing, monitoring and recording performance to achieve the business plans of the team/organisation.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

- **Links to other units:** None

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |  |   |
|--|---|
| 1. Coordinate resource use to achieve profit productivity targets.               | 1.1 Collect, analyse and organise resource information for use in operational plans in consultation with colleagues and specialist resource managers.     |
|  | 1.2 Ensure operational plans contribute to the achievement of the organisation's performance/business plan.   |
|  | 1.3 Ensure operational plans identify available resources, taking into account customer needs and the organisation's plans.                               |
|  | 1.4 Ensure plans maximise value gained from the diversity of the organisation's resources.  |
|  | 1.5 Prepare contingency plans in the event that initial plans need to be varied.  |
| 2. Acquire resources to achieve operational plan.                                | 2.1 Recruit and induct employees within the organisation's human resource management policies and practices.  |
|  | 2.2 Acquire physical resources and services in accordance with the organisation's practices and procedures.   |
| 3. Monitor operational performance of drill supervisors and drilling operations. | 3.1 Monitor performance systems and processes to assess progress in achieving profit/productivity plans and targets.                                      |
|  | 3.2 Analyse budget and actual financial information and interpret to monitor profit/productivity performance.   |
|  | 3.3 Identify unsatisfactory performance and take prompt action to rectify the situation.  |
|  | 3.4 Negotiate recommendations for variation to operational plans and have approved by the designated persons/groups.                                      |
| 4. Monitor resource usage.   | 4.1 Monitored systems and processes to establish whether resources are being used as planned.   |
|  | 4.2 Investigate problems with resource usage and rectify and/or report to designated persons/groups.  |
|  | 4.3 Mentor and coach individuals/teams who have difficulties in using resources to the required standard.   |
|  | 4.4 Manage systems, procedures and records associated with documenting resource acquisition and usage in accordance with the organisation's requirements. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Underpinning skills and knowledge are required:

- Legal rights and responsibilities
- All relevant statutory and regulatory requirements which affect multiple sites
- Inspection/research techniques for collection of data
- Analysis and problem solving techniques
- Contractual rights and responsibilities
- Planning control systems (sales, advertising and promotion, logistics)
- Record keeping systems for multiple sites
- Communication systems, processes and procedures

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

At AQF Level 6 managers will normally be engaged in a workplace context in which they:

- Are autonomous, working under broad guidance
- May supervise others
- May guide teams
- May have responsibility for planning and managing the work of others
- Will be involved in self-directed application of knowledge
- Have substantial depth of knowledge in some area and a range of skills for work tasks, roles and functions
- Operate in varied or highly specific contexts
- Use competencies independently for routine and non-routine purposes
- Use judgement for self and others in planning and using resources, services and processes to achieve outcomes within time constraints

Managers at this level will normally operate in diverse and complex workplace environments in which they use the organisation's:

- Goals, objectives, plans, systems and processes
- Business and performance plans
- Ethical standards
- Quality and continuous improvement processes and standards
- Resources, which may be subject to negotiation

A range of learning opportunities may be used, for example:

- Mentoring
- Coaching
- Exchange/rotation
- Action learning
- Structured training programs

Resources may include:	<ul style="list-style-type: none"><li>• People</li><li>• Finance</li><li>• Equipment</li><li>• Power/energy</li><li>• Buildings/facilities</li><li>• Technology</li><li>• Information</li><li>• Time</li><li>• Computer software</li></ul>
Documentation may include:	<ul style="list-style-type: none"><li>• Business plans/proposals</li><li>• Submissions</li></ul>
Financial data may include:	<ul style="list-style-type: none"><li>• Budgets</li><li>• Estimates</li><li>• Financial projections</li></ul>
Other skills required may include:	<ul style="list-style-type: none"><li>• Research skills</li><li>• Computer skills</li></ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects of evidence to be considered</b>	<ul style="list-style-type: none"><li>• Demonstrates effectiveness of documented business plan, market research, operational plan, financial strategies/reports</li><li>• Achieves business and performance plans</li><li>• Maintains a profit/productivity focus in managing resources</li><li>• Records/reports information, and reports to designated individuals/groups within established systems</li><li>• Uses information management systems</li><li>• Identifies resources required to achieve operational plans for multiple sites</li><li>• Maintains a profit/productivity focus in managing resources for multiple sites</li><li>• Adapts to new situations using appropriate strategies (e.g. innovation, persistence, resourcefulness and contingency planning)</li><li>• Use legislation, codes and national standards relevant to the workplace</li></ul>
--	--

<b>Interdependent assessment of units</b>	Assessment of this unit may need to be considered in relation to other units.
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**Resource implications**

The delivery and assessment of this unit will require access to data and systems such as would be available in the typical manager's workplace in the drilling industry.

**Consistency in performance**

Evidence should be available that these competencies can be performed consistently. In particular there should be evidence that multiple drilling operations can be managed under a range of typical conditions.

**Context of assessment**

Ideally assessment will use workplace-generated evidence as the primary evidence of competency. This should be supplemented by targeted questioning to confirm the underpinning knowledge.

Where this is not practical, this unit may also be assessed by use of projects, workplace based assignments and other appropriate mechanisms which simulate a workplace environment.

## DRTOG55A

### Unit Descriptor

## Support blow out prevention operations

This unit specifies the competency required to support blow out prevention operations. It includes the minimum criteria for competency assessment of supporting blow out prevention operations.

The unit covers assisting with BOP operations and monitoring and reporting safety issues.

### Employability Skills

This unit contains employability skills.

### Application of the Unit

This is a drilling unit of competency specifying the outcomes and safe work practices which should be carried out by people operating at AQF2 level who are supporting blow out prevention operations in coal-seam methane gas drilling operations.

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |                                     |  |
|-------------------------------------|--|
| 1. Assist with well BOP operations  | 1.1 Assist with <b>well kill</b> activities<br>1.2 Monitor and report BOP equipment status.<br>1.3 Isolate BOP system accumulator.<br>1.4 Monitor and adjust chokes and manifolds as directed.<br>1.5 Assist with emergency shutdown procedures.<br>1.6 Participate in emergency <b>drills and exercises</b> .<br>1.7 <b>Communicate</b> operational activities and information to other crew during BOP operations. |
| 2. Monitor and report safety issues | 2.1 Identify, address and report <b>hazards</b> associated with blow out prevention .<br>2.2 Recognise <b>kick indicators</b> and advise Driller during operations.<br>2.3 Identify and report <b>ignition sources</b> .<br>2.4 Identify and report sources and presence of <b>flammable gases and emissions</b> .<br>2.5 Identify and report BOP malfunctions.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Specific skills are required to achieve the performance criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.

This includes the ability to carry out the following, as required, for supporting safe blow out prevention operations:

- working in a team
- detecting kick warning signs and indicators
- interpreting work instructions and procedures
- recording and reporting process status

### Required knowledge:

Specific knowledge is required to achieve the performance criteria of this unit, particularly for its application in the variety of circumstances in which this unit may be applied.

This includes knowledge of the following as required for supporting safe blow out prevention operations.

- the principles and practices of coal seam gas control
- coal seam gas control procedures
- risks and their controls related to coal seam gas control
- BOP annular equipment operating principles
- BOP control system principles
- operating principles of chokes and manifolds
- kill principles and methods
- sources of ignition and their dangers and controls
- sources of flammable gases and emissions and their dangers and controls
- kick detection warnings and indications and the responses to them
- purpose, type and conduct of coal seam gas control emergency drills and exercises
- communication methods and protocols during well BOP operations

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Well kill methods*** may include:

- bringing pump up to kill speed
- maintaining constant bottom hole pressure
- shutting down the kill operation while maintaining a constant bottom hole pressure
- controlling the influx using the Driller's Method

***Drills and exercises*** may include:

- pit drill
- trip drill
- abandonment drill
- evacuation

**Communications** may include:

- two-way radio
- hand signals
- telephone
- public address system
- written work instructions

**Hazards** may include:

**blow out gas to surface**

- ignition of gas
- toxic gases
- pressurised coal seam gas system

**Kick indicators** may include:

- flow from wells (pump off)
- increase in flow from well (pumps on)
- pit volume gain

**Ignition sources** may include:

**Non-explosion protected devices such as:**

- electrical connections/leads
- rig lights and wiring
- flashlights
- computers
- mobile phones
- electronic car keys
- charging circuits from solar panels
- charging and starting circuits from vehicles
- drill rigs
- mud pumps
- lighting plants
- auxiliary equipment
- static discharge - lightning
- flare stacks
- engine exhausts from vehicles, drill rigs, auxiliary equipment

**Flammable gases and emissions** may include:

**Methane (CH<sub>4</sub>)**

- Hydrogen Sulphide (H<sub>2</sub>S)
- Carbon Dioxide (CO<sub>2</sub>)
- Carbon Monoxide (CO)

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

- To demonstrate competence in this unit a person must be able to provide evidence that they can successfully and safely support blow out prevention operations to the site/organisation rules and procedures.
- Assessment will need to be contextualised for different types of blow out prevention operations, equipment and sites.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the Performance Criteria, Required Skills and Knowledge of this unit and include evidence of the following:

- compliance with legislative and regulatory requirements
- monitoring BOP equipment status
- monitoring BOP control system status
- adjusting chokes and returns
- recognising and responding to kick warning signs and indicators
- assisting with kill activities
- assisting with emergency shutdowns
- communicating with well control crew members
- identifying and reporting ignition sources
- identifying and reporting flammable gases and emissions

### Context of and specific resources for assessment

- The application of competency is to be assessed in the workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
- Assessment of essential underpinning knowledge, other than confirmatory questions, may be conducted in an off-site context.
- Assessment is to comply with relevant regulatory or Australian Standards requirements.
- The following resources should be made available:
  - workplace location;
  - equipment, materials and personnel relevant to applying well control practices;
  - specifications and work instructions.



**Method of assessment**

- Assessment must satisfy the endorsed Assessment Guidelines of the relevant Training Package.
- Assessment methods must confirm consistency and accuracy of performance together with application of required knowledge.
- Assessment can be by direct observation of tasks with questioning on required knowledge, by verification by third parties, or any valid method of collecting evidence of competency..
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge.
- Assessment should be applied under work related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- Assessment may be in conjunction with assessment of other units of competency as required by the job.

## DRTOG56A

### Unit Descriptor

## Assist with coal seam gas control

This unit specifies the competency required to assist with coal seam gas control. It includes the minimum criteria for competency assessment of assisting with coal seam gas control practices.

The unit covers assisting with coal seam gas control activities and monitoring and reporting safety issues.

### Employability Skills

### Application of the Unit

This unit contains employability skills.

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Unit Sector** Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |   |  |
|---|--|
| 1. Assist with coal seam gas control activities | 1.1 Monitor flows and returns for correct volumes and rates, and report inconsistencies to Driller.<br>1.2 Assist in operation of coal seam gas control pumps.<br>1.3 Read and interpret <b>measuring devices</b> to monitor correct operation of coal seam gas control process and equipment.<br>1.4 <b>Communicate</b> operational activities and information to other crew during coal seam gas control operations.<br>1.5 Assist in installation and maintenance of equipment.<br>1.6 Participate in emergency <b>drills and exercises</b> . |
| 2. Monitor and report safety issues             | 2.1 Identify, address and report <b>hazards</b> associated with coal seam gas control under varying <b>working conditions</b> .<br>2.2 Recognise <b>kick indicators</b> and advise Driller during coal seam gas control operations.<br>2.3 Identify and report <b>ignition sources</b> .<br>2.4 Identify and report sources and presence of <b>flammable gases and emissions</b> .<br>2.5 Identify and report running <b>coal seam gas control equipment</b> malfunctions.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Specific skills are required to achieve the performance criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.

This includes the ability to carry out the following, as required, for assisting with safe and effective coal seam gas control activities:

- working in a team
- interpreting gauges, graphs
- interpreting work instructions and procedures
- recording and reporting process status
- using hand and power tools

### Required knowledge:

Specific knowledge is required to achieve the performance criteria of this unit, particularly for its application in the variety of circumstances in which this unit may be applied.

This includes knowledge of the following as required for safe, effective assistance with coal seam gas control activities.

- the principles and practices of coal seam gas control
- coal seam gas control procedures
- risks and their controls related to coal seam gas control
- sources of ignition and their dangers and controls
- sources of flammable gases and emissions and their dangers and controls
- pumping systems principles
- purpose, operation and interpretation of measuring and testing devices
- kick detection warnings and indications and the responses to them
- purpose, type and conduct of emergency drills and exercises
- communication methods and protocols during coal seam gas control operations

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Measuring devices*** may include:

- gauges
- pump stroke counters
- mud density measuring devices

***Communications*** may include:

- two-way radio
- hand signals
- telephone
- public address system
- written work instructions

**Drills and exercises** may include:

- pit drill
- trip drill
- abandonment drill
- evacuation

**Hazards** may include:

**blow out gas to surface**

- ignition of gas
- toxic gases
- pressurised coal seam gas system

**Working conditions** may include:

- night time operations
- day time operations
- hot climates
- cold climates
- snow
- wet weather conditions
- high wind

**Kick indicators** may include:

- flow from wells (pump off)
- increase in flow from well (pumps on)
- pit volume gain

**Ignition sources** may include:

**Non-explosion protected devices such as:**

- electrical connections/leads
- rig lights and wiring
- flashlights
- computers
- mobile phones
- electronic car keys
- charging circuits from solar panels
- charging and starting circuits from vehicles
- drill rigs
- mud pumps
- lighting plants
- auxiliary equipment
- static discharge - lightning
- flare stacks
- engine exhausts from vehicles, drill rigs, auxiliary equipment

**Flammable gases and emissions** may include:

**Methane (CH<sub>4</sub>)**

- Hydrogen Sulphide (H<sub>2</sub>S)
- Carbon Dioxide (CO<sub>2</sub>)
- Carbon Monoxide (CO)

**Coal seam gas control equipment** may include:

- mud system
- blooie diverter lines
- auxiliary equipment
- pressure measuring devices
- gas detection equipment and devices
- diverters

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

- To demonstrate competence in this unit a person must be able to provide evidence that they can successfully and safely assist with coal seam gas control activities to the site/organisation rules and procedures.
- Assessment will need to be contextualised for different types of coal seam gas control operations, equipment and sites.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the Performance Criteria, Required Skills and Knowledge of this unit and include evidence of the following:

- compliance with legislative and regulatory requirements
- recognition and response to kick warning signs and indicators
- safe and effective assistance with coal seam gas control
- communication with coal seam gas control crew members
- reading and interpretation of measuring and testing equipment and devices
- monitoring of flows and returns

### Context of and specific resources for assessment

- The application of competency is to be assessed in the workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
- Assessment of essential underpinning knowledge, other than confirmatory questions, may be conducted in an off-site context.
- Assessment is to comply with relevant regulatory or Australian Standards requirements.
- The following resources should be made available:
  - workplace location;
  - equipment, materials and personnel relevant to assisting with coal seam gas control practices;
  - specifications and work instructions.

## **Method of assessment**

- Assessment must satisfy the endorsed Assessment Guidelines of the relevant Training Package.
- Assessment methods must confirm consistency and accuracy of performance together with application of required knowledge.
- Assessment can be by direct observation of tasks with questioning on required knowledge, by verification by third parties, or any valid method of collecting evidence of competency..
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge.
- Assessment should be applied under work related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- Assessment may be in conjunction with assessment of other units of competency as required by the job.

**DRTOG57A****Apply effective coal seam gas control practices****Unit Descriptor**

This unit specifies the competency required to apply effective coal seam gas(non BOP) control practices when drilling in coal-seams. It includes the minimum criteria for competency assessment of the application of coal seam gas control practices.

**Employability Skills**

The unit covers applying coal seam gas control strategies; coordinating crew member activities; operation and monitoring of coal seam gas control equipment; and applying coal seam gas kill procedures.

**Application of the Unit**

This unit contains employability skills.

This is a drilling unit of competency specifying the outcomes and safe work practices which should be carried out by people operating at AQF3 level who are applying coal seam gas control practices in coal-seam methane gas drilling operations.

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Apply coal seam gas control strategies           | <p>1.1 Apply approved methods to control identified <b>hazards</b> associated with coal seam gas control under varying <b>working conditions</b>.</p> <p>1.2 Recognise and respond to <b>early warning signs</b> of kicks and coal seam gas going under-balanced while drilling.</p> <p>1.3 Recognise <b>kick indicators</b> and apply kick detection methods and responses during coal seam gas control operations.</p> <p>1.4 Operate equipment to minimise <b>swabbing and surging</b>.</p> <p>1.5 Apply tripping methods in accordance with operating requirements.</p> <p>1.6 Apply relevant components of industry requirements and government regulations related to coal seam gas control and influx prevention during operations.</p> <p>1.7 Prepare <b>records and reports</b> in according to statutory and site requirements.</p> |
| 2. Coordinate coal seam gas control crew activities | <p>2.1 Inform assistants of their roles and responsibilities in a coal seam gas control situation and monitor their application.</p> <p>2.2 <b>Communicate</b> operational activities and information to other crew during coal seam gas control operations.</p> <p>2.3 Conduct coal seam gas control <b>drills and exercises</b> to ensure crew readiness for emergency situations.</p>  |

- 3. Operate and monitor coal seam gas control equipment and processes
  - 3.1 Verify availability and set-up of coal seam gas control equipment.
  - 3.2 Inspect **coal seam gas control equipment** for safety and fitness-for-purpose and rectify and/or report faults and malfunctions
  - 3.3 Install, test and operate **coal seam gas control equipment** to manufacturers' and coal seam gas control operational requirements.
  - 3.4 **Monitor, read and interpret** measuring and testing equipment and devices to ensure planned, safe, effective coal seam gas control.
  - 3.5 Assist in installation, maintenance and replacement of equipment.
- 4. Apply coal seam gas kill procedures
  - 4.1 Confirm **coal seam gas control procedures and activities** with crew members
  - 4.2 Apply **operational instructions**
  - 4.3 Apply coal seam gas control **working practices**
  - 4.4 Apply **coal seam gas kill methods** according to site requirements.
  - 4.5 Carry out emergency shutdown procedures.
  - 4.6 **Communicate** incident information to other crew members



## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Specific skills are required to achieve the performance criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.

This includes the ability to carry out the following, as required, for applying safe, effective coal seam gas control practices:

- working in a team
- taking measurements
- making calculations and estimations relevant to activities
- interpreting gauges
- detecting kick warning signs and indicators
- interpreting work instructions and procedures
- supervising drill assistant
- conducting and evaluating drills and exercises
- using hand and power tools

### Required knowledge:

Specific knowledge is required to achieve the performance criteria of this unit, particularly for its application in the variety of circumstances in which this unit may be applied.

This includes knowledge of the following as required for applying safe, effective coal seam gas control practices.

- the principles and practices of coal seam gas control
- coal seam gas control procedures and their application
- risks and their controls related to coal seam gas control
- kill principles and methods
- effects of hydrostatic pressure when drilling through gas bearing formations
- sources of ignition and their dangers and controls
- function, installation, operation, maintenance and use of coal seam gas control and auxiliary equipment
- causes, effects and response to equipment failures
- drilling parameters and their interpretation
- purpose, operation and interpretation of measuring and testing devices
- kick detection warnings and indications and the responses to them
- purpose, type and conduct of coal seam gas control emergency drills and exercises
- causes and effects of swabbing and surging
- pressure concepts and effects
- communication methods and protocols during coal seam gas control operations
- influx parameters
- tripping requirements and techniques
- emergency shutdown methods
- type, format and implementation of coal seam gas control documents

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Hazards** may include:

**blow out gas to surface**

- ignition of gas
- toxic gases
- pressurised coal seam gas system

**Working conditions** may include:

- night time operations
- day time operations
- hot climates
- cold climates
- snow
- wet weather conditions
- high wind

**Early warning** signs may be:

- rate of penetration trends
- trends shown in torque/drag

**Kick indicators** may include:

- flow from coal seam gas (pump off)
- increase in flow from coal seam gas (pumps on)
- pit volume gain

**Swabbing and surging** may be affected by:

- coal seam gas and pipe geometry
- coal seam gas depth
- fluid characteristics
- coal seam gas conditions and formation properties
- tool pulling and running speeds
- BHA configuration

**Records and reports** may include:

- specifications
- operator's instructions
- drilling program
- technical information
- daily pre-tour checklist
- daily pre-drilling checklist
- AP RP 53
- tour sheet
- tour reports and drilling logs
- kill sheet
- incident report form
- drilling line record sheet
- shut-in procedures
- equipment damage report

**Communications** may include:

- two-way radio
- hand signals
- telephone
- public address system
- written work instructions

**Drills and exercises** may include:

- pit drill
- trip drill
- abandonment drill
- evacuation

**Coal seam gas control equipment** may include:

- mud system
- diverters
- auxiliary equipment
- pressure measuring devices
- gas detection equipment and devices
- diverters

**Monitoring, reading and interpreting** may apply to:

- drilling fluid gain or loss
- drilling parameters
- pressure gauges
- mud balance values
- pump stroke counters
- gas readings
- amount of fluid added to coal seam gas
- kick warnings and indicators
- circulation rate

**Coal seam gas control procedures** and activities may include:

- time of coal seam gas shut-in
- initial shut-in pressures
- stage of kill
- type of kill procedure employed
- status of coal seam gas control equipment
- flow path for coal seam gas control method
- agreed procedures

**Operational instructions**

may include:

- type of kill procedure to use
- type of shut-in procedure to use
- action to be taken in the event of approaching MAASP
- monitoring pit levels

**Working practices** may

include:

- confirmation of shut-in
- monitoring of shut-in pressures
- monitoring of accumulator pressures
- correct SPM to be maintained during kill
- monitoring pump efficiency
- individual operation
- team operation
- use of personal protective equipment
- consideration of H<sub>2</sub>S and other toxic substances
- consideration of flammables and ignition sources
- maintaining continuous communication
- reacting to on-site emergencies

**Coal seam gas kill**

**methods** may include:

- bringing pump up to kill speed
- maintaining constant bottom coal seam gas pressure
- shutting down the kill operation while maintaining a constant bottom coal seam gas pressure
- controlling the influx using the Driller's Method

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Overview of assessment**

- To demonstrate competence in this unit a person must be able to provide evidence that they can safely and effectively apply coal seam gas control practices to the site/organisation rules and procedures.
- Assessment will need to be contextualised for different types of coal seam gas control operations, equipment and sites.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the Performance Criteria, Required Skills and Knowledge of this unit and include evidence of the following:

- compliance with legislative and regulatory requirements
- inspection, operation, testing and monitoring of coal seam gas control equipment
- response to equipment failure to maintain safety and coal seam gas integrity
- recognition and response to kick warning signs and indicators
- shutting-in a kicking coal seam gas well
- carrying out coal seam gas control procedures
- carrying out emergency shutdown procedures
- communicating with coal seam gas control crew members
- controlling drilling parameters
- reading and interpreting measuring and testing equipment and devices
- monitoring and controlling circulation and circulation paths
- completing documentation legibly and accurately

**Context of and specific resources for assessment**

- The application of competency is to be assessed in the workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
- Assessment of essential underpinning knowledge, other than confirmatory questions, may be conducted in an off-site context.
- Assessment is to comply with relevant regulatory or Australian Standards requirements.
- The following resources should be made available:
  - workplace location;
  - equipment, materials and personnel relevant to applying coal seam gas control practices;
  - specifications and work instructions.

**Method of assessment**

- Assessment must satisfy the endorsed Assessment Guidelines of the relevant Training Package.
- Assessment methods must confirm consistency and accuracy of performance together with application of required knowledge.
- Assessment can be by direct observation of tasks with questioning on required knowledge, by verification by third parties, or any valid method of collecting evidence of competency..
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge.
- Assessment should be applied under work related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- Assessment may be in conjunction with assessment of other units of competency as required by the job.

**DRTOG58A****Apply blow out prevention operational procedures****Unit Descriptor**

This unit specifies the competency required to apply blow out prevention operational procedures. It includes the minimum criteria for competency assessment of the application of blow out prevention operational procedures.

**Employability Skills**

The unit covers applying coal seam gas control strategies; coordinating crew member activities; operation and monitoring of coal seam gas control equipment; and applying coal seam gas kill procedures.

**Application of the Unit**

This unit contains employability skills.

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

1. Apply coal seam gas control strategies

- 1.1 Apply approved methods to control identified **hazards** associated with coal seam gas control under varying **working conditions**.
- 1.2 Recognise and respond to **early warning signs** of kicks and coal seam wells going under-balanced while drilling.
- 1.3 Recognise **kick indicators** and apply kick detection methods and responses during coal seam gas control operations.
- 1.4 Operate equipment to control **swabbing and surging**.
- 1.5 Apply tripping methods in accordance with operating requirements.
- 1.6 Perform shut-in procedures for bottom-drilling and coal seam gas tripping-in/out according to statutory and site requirements.
- 1.7 Apply relevant components of industry requirements and government regulations related to coal seam gas control and influx prevention during operations.
- 1.8 Prepare **records and reports** in according to statutory and site requirements.

2. Coordinate coal seam gas control crew activities

- 2.1 Inform assistants of their roles and responsibilities in a coal seam gas control situation and monitor their application.
- 2.2 **Communicate** operational activities and information to other crew during coal seam gas control and blow out prevention operations.
- 2.3 Conduct coal seam gas control **drills and exercises** to ensure crew readiness for emergency situations.

- 3. Operate and monitor coal seam gas control equipment and processes
  - 3.1 Verify availability and set-up of coal seam gas control equipment.
  - 3.2 Inspect **coal seam gas control equipment** for safety and fitness-for-purpose and rectify and/or report faults and malfunctions.
  - 3.3 Install, test and operate **coal seam gas control equipment** to manufacturers' and coal seam gas control operational requirements.
  - 3.4 **Monitor, read and interpret** measuring and testing equipment and devices to ensure planned, safe coal seam gas control.
  - 3.5 Assist in installation, maintenance and replacement of equipment.
- 4. Apply coal seam gas kill procedures
  - 4.1 Confirm **coal seam gas control procedures and activities** with crew members.
  - 4.2 Check, read, interpret and record pressures and gauges and undertake **corrective action**.
  - 4.3 Apply **operational instructions**.
  - 4.4 Apply coal seam gas control **working practices**.
  - 4.5 Apply **coal seam gas kill methods** according to site requirements.
  - 4.6 Monitor the operation of BOP.
  - 4.7 **Monitor and adjust** the operation of BOP control system.
  - 4.8 **Monitor and control circulation and circulation paths** to ensure effective coal seam gas control.
  - 4.9 Carry out emergency shutdown procedures.
  - 4.10 **Communicate** incident information to other crew members.



## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

Specific skills are required to achieve the performance criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.

This includes the ability to carry out the following, as required, for applying safe blow out prevention practices:

- working in a team
- taking measurements
- making calculations and estimations relevant to activities
- interpreting gauges
- detecting kick warning signs and indicators
- completing trip sheets
- completing kill sheets
- interpreting work instructions and procedures
- supervising drill assistant
- conducting and evaluating drills and exercises
- using hand and power tools

### Required knowledge:

Specific knowledge is required to achieve the performance criteria of this unit, particularly for its application in the variety of circumstances in which this unit may be applied.

This includes knowledge of the following as required for applying safe blow out prevention procedures.

- the principles and practices of coal seam gas control
- coal seam gas control procedures and their application
- risks and their controls related to coal seam gas control
- BOP annular equipment - types and operating principles
- BOP control system principles
- operating principles of chokes and manifolds
- kill principles and methods
- effects of hydrostatic pressure when drilling through gas bearing formations
- sources of ignition and their dangers and controls
- function, installation, operation, maintenance and use of coal seam gas control and auxiliary equipment
- causes, effects and response to equipment failures
- drilling parameters and their interpretation
- purpose, operation and interpretation of measuring and testing devices
- kick detection warnings and indications and the responses to them
- purpose, type and conduct of coal seam gas control emergency drills and exercises
- causes and effects of swabbing and surging
- pressure concepts and effects
- communication methods and protocols during coal seam gas control operations
- influx parameters
- safe coal seam gas shut-in requirements and procedures
- tripping requirements and techniques
- constant bottom coal seam gas pressure method
- emergency shutdown methods
- type, format and implementation of coal seam gas control documents

## RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Hazards** may include:

### **blow out gas to surface**

- ignition of gas
- toxic gases
- pressurised coal seam gas system

**Working conditions** may include:

- night time operations
- day time operations
- hot climates
- cold climates
- snow
- wet weather conditions
- high wind

**Early warning** signs may be:

- rate of penetration trends
- drilling break
- trends shown in torque/drag

**Kick indicators** may include:

- flow from coal seam gas (pump off)
- increase in flow from coal seam gas (pumps on)
- pit volume gain

**Swabbing and surging** may be affected by:

- coal seam gas and pipe geometry
- coal seam gas depth
- fluid characteristics
- coal seam gas conditions and formation properties
- tool pulling and running speeds
- BHA configuration

**Records and reports** may include:

- specifications
- operator's instructions
- drilling program
- technical information
- daily pre-tour checklist
- daily pre-drilling checklist
- BOP critical test parameters
- AP RP 53
- tour sheet
- tour reports and drilling logs
- kill sheet
- incident report form
- drilling line record sheet
- shut-in procedures
- equipment damage report

**Communications** may include:

- two-way radio
- hand signals
- telephone
- public address system
- written work instructions

**Drills and exercises** may include:

- pit drill
- trip drill
- abandonment drill
- evacuation

**Coal seam gas control equipment** may include:

- mud system
- blow out preventer
- manifolds and chokes
- accumulator
- degassers
- monitors
- diverters
- auxiliary equipment
- pressure measuring devices
- gas detection equipment and devices
- Washington-type diverters

**Monitoring, reading and interpreting** may apply to:

- drilling fluid gain or loss
- drilling parameters
- pressure gauges
- mud balance values
- pump stroke counters
- gas readings
- amount of fluid added to coal seam gas
- kick warnings and indicators
- circulation rate

**Coal seam gas control procedures and activities** may include:

- time of coal seam gas shut-in
- initial shut-in pressures
- stage of kill
- type of kill procedure employed
- status of coal seam gas control equipment
- flow path for coal seam gas control method
- agreed procedures

**Corrective actions** may include:

- changing over pumps in the event of primary failure
- using secondary choke in the event of primary failure
- using alternate preventer in the event of primary failure
- running accumulator emergency backup in case of primary failure

**Operational instructions** may include:

- type of kill procedure to use
- type of shut-in procedure to use
- action to be taken in the event of approaching MAASP
- monitoring pit levels

**Working practices** may include:

- confirmation of shut-in
- monitoring of shut-in pressures
- monitoring of accumulator pressures
- correct circulation rate to be maintained during kill
- monitoring pump efficiency
- individual operation
- team operation
- use of personal protective equipment
- consideration of H<sub>2</sub>S and other toxic substances
- consideration of flammables and ignition sources
- maintaining continuous communication
- reacting to on-site emergencies

**Coal seam gas kill methods** may include:

- bringing pump up to kill speed
- maintaining constant bottom coal seam gas pressure
- shutting down the kill operation while maintaining a constant bottom coal seam gas pressure
- controlling the influx using the Driller's Method

**Monitoring and adjusting** may include:

- pressures
- volumes
- flows

**Monitoring and controlling circulation and circulation paths** may include:

- existing and alternative paths from the pump through the choke manifold to the disposal system
- valve status for specific circulating paths
- assessing the circulation hydrostatic head to determine of a drop in the level of drilling fluid in the annulus on hydrostatics balancing pressure

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Overview of assessment

- To demonstrate competence in this unit a person must be able to provide evidence that they can successfully and safely apply blow out prevention operational procedures to the site/organisation rules and procedures.
- Assessment will need to be contextualised for different types of blow out prevention procedures, equipment and sites.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the Performance Criteria, Required Skills and Knowledge of this unit and include evidence of the following:

- compliance with legislative and regulatory requirements
- inspection, operation, testing and monitoring of coal seam gas control equipment
- response to equipment failure to maintain safety and coal seam gas integrity
- recognition and response to kick warning signs and indicators
- shutting-in a kicking coal seam gas
- carrying out coal seam gas control procedures
- carrying out emergency shutdown procedures
- communicating with coal seam gas control crew members
- controlling drilling parameters
- reading and interpreting measuring and testing equipment and devices
- monitoring and controlling circulation and circulation paths
- monitoring BOP control system
- completing documentation legibly and accurately

**Context of and specific resources for assessment**

- The application of competency is to be assessed in the workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
- Assessment of essential underpinning knowledge, other than confirmatory questions, may be conducted in an off-site context.
- Assessment is to comply with relevant regulatory or Australian Standards requirements.
- The following resources should be made available:
  - workplace location;
  - equipment, materials and personnel relevant to applying blow out prevention procedures;
  - specifications and work instructions.

**Method of assessment**

- Assessment must satisfy the endorsed Assessment Guidelines of the relevant Training Package.
- Assessment methods must confirm consistency and accuracy of performance together with application of required knowledge.
- Assessment can be by direct observation of tasks with questioning on required knowledge, by verification by third parties, or any valid method of collecting evidence of competency..
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential required knowledge.
- Assessment should be applied under work related conditions and require evidence of process.
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.
- Assessment may be in conjunction with assessment of other units of competency as required by the job.

**DRTOGOF05B****Unit Descriptor****Employability Skills****Application of the Unit****Carry out deck operations**

This unit covers the carrying out of deck operations by an offshore roustabout.

This unit contains employability skills.

- **Units replaced:** DRTOGOF05A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |  |
|--|--|
| 1. Plan and prepare for operations                                     | 1.1 Conform to safe working practices and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational requirements.<br>1.5 Confirm availability of necessary auxiliary utilities in accordance with operational requirements. |
| 2. Carry out deck operations   | 2.1 Carry out deck operations safely according to operational requirements.<br>2.2 Identify faults and take appropriate remedial action within functional responsibility.<br>2.3 Deal with spillages in accordance with operational requirements.<br>2.4 Conform to safe working practices and current operational requirements.   |
| 3. Assist drill crew as directed                                       | 3.1 Place and tier tubulars in appropriate racks.<br>3.2 Measure and label tubulars and record details as required.<br>3.3 Operate air tugger winches as directed.<br>3.4 Give assistance in positioning BOP over moonpool.<br>3.5 Give assistance to crane operator in supplying marine riser and running tools to the drill floor.   |
| 4. Operate pneumatic and electric power tools                          | 4.1 Wear appropriate protective clothing and equipment.<br>4.2 Operate pneumatic and electric power tools in accordance with company and manufacturers' specifications.  |
| 5. Provide labour for loading and discharge of helicopters as directed | 5.1 Use approved safety approach sectors for access to and from the aircraft.<br>5.2 Fuel aircraft under the direction of the aircraft captain and using approved fuelling procedures.<br>5.3 Lift/move baggage and cargo between rig and helicopter using correct lifting techniques.   |

- |  |  |
|--|--|
| 6. Provide labour for making up drilling mud | 6.1 Read, interpret and apply mud material data sheets.<br>6.2 Wear correct protective clothing and equipment in accordance with company requirements.<br>6.3 Apply correct lifting techniques for handling of sack material.  |
| 7. Carry out post-job operations             | 7.1 Confirm equipment is clean and ready for re-use according to operational requirements.<br>7.2 Store equipment safely and securely in the designated location according to operational requirements.<br>7.3 Identify faults in the equipment and take appropriate remedial action within functional responsibility. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Carry out duties of a crane chaser/dogger according to company and statutory requirements
- Select and fit correct stinger/slides appropriate for crane load
- Effect the transfer of personnel by crane
- Place, measure, label and record details of tubulars
- Correctly operate power tools, as directed
- Wear appropriate personal protective clothing and equipment during operation of power tools
- Assist in running/recovery of BOP stack
- Operate air tugger winch correctly
- Assist in supply of marine riser and equipment to drill floor
- Assist in loading/discharge and fuelling of helicopter
- Assist derrickman in making up drilling mud
- Identify and report faults
- Communicate and report in accordance with company and statutory requirements
- Read and interpret standard operating procedures, work instructions and data sheets
- Apply correct lifting techniques
- Fuel aircraft under direction and in accordance with approved fuelling procedures

### Required knowledge:

- Deck operations
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures
- Equipment operations
- Reporting procedures



## RANGE STATEMENT

This unit covers the role of an offshore roustabout in carrying out deck operations.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions

Weather conditions may include:

- Sun, rain, wind, storms
- Hot and cold
- Calm to severe weather conditions
- 24 hour operation

Equipment preparation may include:

- Chipping and painting
- Cleaning
- Lubricating
- Basic maintenance
- Equipment handling

Safety equipment includes:

- Fire protection
- First Aid
- Personal protective equipment

Spillages may be:

- Hazardous
- Non-hazardous

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Remedial action taken to deal with errors, omissions and shortages may include:

- Report
- Rectify
- Record

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Care and maintenance of hard tools
- Permit to work system
- Occupational Health and Safety/environmental procedures

### Interdependent assessment of units

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance
- DRTOGOF06B Handle and store cargo
- DRTOGOF07B Contribute to the transfer of passengers and freight during helicopter operations

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGOF06B****Unit Descriptor****Handle and store cargo**

This unit covers the handling and storage of cargo as carried out by an offshore roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGOF06A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                 |  |
|---------------------------------|--|
| 1. Prepare equipment.           | 1.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.2 Clarify difficulties in carrying out the instructions with relevant personnel.<br>1.3 Confirm availability and status of necessary permits to work in accordance with operational requirements.<br>1.4 Confirm availability of necessary auxiliary equipment in accordance with operational requirements.<br>1.5 Identify errors, omissions and shortages and take appropriate remedial action within functional responsibility.<br>1.6 Use equipment and tools suitable for the job and the environment.<br>1.7 Prepare storage area for cargo arrival in accordance with operational requirements. |
| 2. Handle and store cargo.      | 2.1 Conform to safe working practices, safety and operational requirements.<br>2.2 Handle cargo using safe handling techniques in accordance with operational requirements.<br>2.3 Provide assistance with crane operations.<br>2.4 Pack and unpack containers in accordance with operational requirements.<br>2.5 Check cargo using marks, numbers, quantities/weights, to ensure correct identification.<br>2.6 Identify and report faults and take appropriate remedial action within functional responsibility.<br>2.7 Store equipment and cargo safely and securely in the designated location according to operational requirements.   |
| 3. Handle and store bulk cargo. | 3.1 Conform to safe working practices and operational requirements.<br>3.2 Carry out bulk cargo transfer according to operational requirements.<br>3.3 Monitor transfer of cargo in accordance with operational requirements.<br>3.4 Identify and report faults accurately and take appropriate remedial action within functional responsibility.  |

- |                                  |   |
|----------------------------------|---|
| 4. Assist with crane operations. | 4.1 Conform to safe working practices and operational requirements.                                   |
|                                  | 4.2 Use appropriate signals to direct movement of loads.  |
|                                  | 4.3 Identify and report faults and take appropriate remedial action within functional responsibility. |
|                                  | 4.4 Relay information to crane operator in accordance with operational requirements.                  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Implement safe working limits when handling and lifting cargo
- Assess, interpret and apply information including technical information

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Safe lifting and handling techniques
- Sliding requirements
- Permit to work system
- Operational requirements and principles of equipment

## RANGE STATEMENT

This unit covers the role of an offshore roustabout in handling cargo.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions

Written reports may include:

- Plant movement advice (PMA)
- Transport manifests

Weather conditions may include:

- Sun, rain, wind, storms
- Hot and cold
- Calm to severe weather conditions
- 24 hour operation

Cargo includes:

- Fluids
- Powder
- Containers
- Restrained palletised
- Loose palletised
- Tubulars

Equipment includes:

- Hoses
- Pumps
- Transfer equipment
- Slings
- Shackles
- Specialist handling equipment

Utilities may include:

- Air
- Fuel
- Power
- Craneage
- Lighting

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Difficulties may include:

- Unclear instructions
- Imprecise details
- Lack of information

Remedial action taken to deal with errors, omissions and shortages may include:

- Report
- Record
- Rectify
- Repair
- Adjust
- Replace

Information may include:

- Oral
- Written
- Visual

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Working knowledge of crane directions
- Lifting and slinging practices
- Selection and inspection of lifting gear

### **Interdependent assessment of units**

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance

### **Context of assessment**

This unit will be assessed on an operational rig site, or using a suitable simulation.

### **Resource implications**

Access is required to an operational rig site, or appropriate simulations.

### **Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGOF07B****Assist in the transfer of passengers and freight during helicopter operations****Unit Descriptor**

This unit covers the assistance in the transfer of passengers and freight during the helicopter operations by an offshore roustabout.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGOF07A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |  |
|--|--|
| 1. Plan and prepare for operations.      | 1.1 Conform to safe working practices and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational requirements.<br>1.5 Confirm availability of necessary auxiliary equipment in accordance with operational requirements. |
| 2. Prepare for helicopter landing.       | 2.1 Conform to safe working practices and operational requirements.<br>2.2 Site equipment for safe and optimum use in accordance with operational instructions.<br>2.3 Assemble freight and baggage for transportation in accordance with operational instructions.  |
| 3. Load and unload helicopter.           | 3.1 Conform to safe working practices and operational requirements.<br>3.2 Make helicopter safe in accordance with operational requirements.<br>3.3 Provide assistance in controlling the transfer of passengers in accordance with operational instructions.<br>3.4 Assemble freight and baggage for transportation in accordance with operational instructions.  |
| 4. Refuelling.                           | 4.1 Provide assistance during refuelling.<br>4.2 Identify and report faults.<br>4.3 Store refuelling equipment properly after use.   |
| 5. Carry out helicopter standby' duties. | 5.1 Obtain and wear appropriate personal protective equipment.<br>5.2 Hold correct position on landing helipad.<br>5.3 Monitor landing and take off.<br>5.4 Report faults and take appropriate action within functional responsibility.  |

- |                                      |   |
|--------------------------------------|---|
| 6. Prepare for helicopter departure. | 6.1 Conform to safe working practices and operational requirements.   |
|                                      | 6.2 Store equipment safely and securely in designated location in accordance with operational requirements. |
|                                      | 6.3 Identify and report faults and take appropriate remedial action.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Understand effects of environmental conditions
- Implement cargo handling/weight distribution requirements
- Understand air regulations covering carriage of dangerous goods
- Understand reasons for clearing away equipment

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Safe lifting and handling techniques
- Safe handling of passengers
- Safe boarding methods
- Hazards associated with approaching the aircraft
- Cargo handling/weight distribution requirements
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Offshore technology

## RANGE STATEMENT

This unit covers the role of an offshore roustabout in assisting with the transfer of passengers and freight during helicopter operations.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Petroleum regulations



Communications may include:

- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions

Weather conditions may include:

- Sun, rain, wind, storms
- Hot and cold
- Calm to severe weather conditions
- 24 hour operation

Equipment includes:

- Fire and safety equipment
- Chocks
- Hand tools
- Nets
- Power supply

Operational instruction may include:

- Passengers
- Baggage
- Freight
- Refuelling
- Shutdown
- Rotors turning
- Helicopter type

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Remedial action taken to deal with errors, omissions and shortages may include:

- Report
- Record
- Rectify
- Repair
- Adjust
- Replace

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Arrival/departure procedures
- Stand-by duties
- Loading/off-loading procedures
- Helicopter approach procedures

**Interdependent assessment of units**

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships

**Context of assessment**

This unit will be assessed using a suitable simulation or if appropriate on an operational rig.

**Resource implications**

Access is required to appropriate simulations or an operational rig.

**Consistency in Performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGOF09B****Contribute to the control of offshore emergencies****Unit Descriptor**

This unit covers the contribution to control of emergencies and critical situations by an offshore floorman.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** That part of DRTOGOF09A which was specific to offshore
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Participate in gas and collision drills | 1.1 Identify, interpret and apply gas alert alarms.<br>1.2 Close watertight and gaslight openings in correct sequence.<br>1.3 Read, interpret and apply emergency ventilation shutdown procedure.<br>1.4 Assist with flood control procedures, as directed.<br>1.5 Identify assigned boat station and follow procedure.   |
| 2. Participate in rig abandonment drills.  | 2.1 Receive, interpret and apply orders for rig abandonment.<br>2.2 Identify correct assigned boat station.<br>2.3 Read, interpret and apply correct survival capsule boarding procedure.<br>2.4 Launch inflatable life raft in accordance with manufacturers' and/or company procedure.<br>2.5 Obtain and wear survival suit/life jacket.<br>2.6 Start survival capsule in accordance with manufacturers' and/or company procedures, as directed.<br>2.7 Lower and release survival capsule in accordance with manufacturers' and/or company procedure.<br>2.8 Operate survival capsule spray protection and air pressurisation system as directed.<br>2.9 Read, interpret and apply first aid and medivac procedures. |
| 3. Participate in "man overboard" drills.  | 3.1 Launch lifebuoy and marker in accordance with manufacturers' and/or company procedures.<br>3.2 Identify, locate and raise correct alarms.<br>3.3 Maintain watch on man in water until rescue is effected.<br>3.4 Direct crane basket recovery, where appropriate.   |

- |  |  |
|--|--|
| 4. Carry out helicopter emergency duties | 4.1 Obtain and wear fire resistant clothing (fearnought suit).                                     |
|  | 4.2 Operate flight deck fire monitors in water and foam modes.                                     |
|  | 4.3 Operate available rescue equipment in accordance with manufacturers and/or company procedures. |
|  | 4.4 Give evacuation assistance from crash site to injured personnel.                               |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Implement personal protection requirements appropriate to the environment
- Recognise effects of changes of ambient conditions on operations
- Locate sources of information and interpret drawings and manuals
- Operate equipment

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Emergency procedures
- Fire and gas control system
- Emergency shutdown control system
- Effects of loss of any utility and its reinstatement
- Functioning of process control, including instrumentation
- Equipment layout and its connection with other systems

## RANGE STATEMENT

This unit covers the role of an offshore floorman in contributing to the control of offshore emergencies.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Petroleum regulations

Communications may include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li></ul>
Weather conditions may include:	<ul style="list-style-type: none"><li>• Sun, rain, wind, storms</li><li>• Hot and cold</li><li>• Calm to severe weather conditions</li><li>• 24 hour operation</li></ul>
Alarms may include:	<ul style="list-style-type: none"><li>• Audible</li><li>• Warning gestures</li><li>• Oral warnings</li><li>• Fixed system specific to installation</li></ul>
Critical situations may include:	<ul style="list-style-type: none"><li>• Operational difficulties</li><li>• Extreme weather</li><li>• Equipment failure</li><li>• Leaks</li><li>• Fires</li><li>• Kicks</li></ul>
Working practices may include:	<ul style="list-style-type: none"><li>• Individual operation</li><li>• Team operation</li><li>• Use of personal protective equipment</li><li>• Consideration of toxic substances</li><li>• Continuous communication maintained</li><li>• Reacting to on-site emergencies</li></ul>
Information formats may include:	<ul style="list-style-type: none"><li>• Oral</li><li>• Telephone</li><li>• Public address system</li><li>• Radio</li><li>• Hand signals</li></ul>
Reporting requirements may include:	<ul style="list-style-type: none"><li>• Oral</li><li>• Written</li></ul>
Safety management systems may include:	<ul style="list-style-type: none"><li>• Organisational</li><li>• Installation</li></ul>

Relevant actions taken to control and alleviate critical situations may include:

- Make safe
- Isolate
- Shut down
- Evacuate work area
- Report
- Record
- Contain
- Rectify

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Rig and emergency procedures
- Occupational Health and Safety guidelines
- Rig layout and muster points
- Evacuation procedures

### **Interdependent assessment of units**

- DRTOG08B Contribute to the health and safety of the working environment
- DRTOG10B Establish and maintain effective working relationships
- DRTOG11B Prepare and operate drilling fluid systems
- DRTOG12B Perform rig floor operations

### **Context of assessment**

This unit will be assessed using a suitable simulation, or if appropriate on an operational rig.

### **Resource implications**

Access is required to appropriate simulations or an operational rig.

### **Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGOF20B****Monitor, operate and maintain mud pits and equipment****Unit Descriptor**

This unit covers the operation of mud pumps as carried out by an offshore derrickman.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGOF20A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                     |  |
|-------------------------------------|--|
| 1. Plan and prepare for operations. | 1.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.2 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.3 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.4 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>1.5 Conform to safe working practices and current legislative and operational requirements. |
| 2. Monitor operation of mud pump.   | 2.1 Visually inspect and listen to mud pumps for abnormal sounds and leaks.<br>2.2 Check lubricating system and identify and report faults.<br>2.3 Check pressure relief valve (PRV) setting.<br>2.4 Check flow path.<br>2.5 Charge discharge dampener with nitrogen, to correct pressure, as required.<br>2.6 Charge suction dampener to correct pressure.  |
| 3. Maintain and repair mud pumps.   | 3.1 Check all clamps when pump is turned off.<br>3.2 Lubricate gear end of pump and check oil levels in gear end of pump.<br>3.3 Replace defective consumables.<br>3.4 Check liners and swabs for size.<br>3.5 Identify faults or potential faults and report immediately.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Check pumps visually and audibly
- Check lubrication system
- Set pressure relief valve
- Check pressure of suction and discharge dampeners
- Charge discharge damper with nitrogen
- Check clamp
- Lubricate and check oil levels in gear end of pump
- Replace swabs, liners, valves, seats and wear plates of fluid end of pump
- Prepare replacement parts for fluid end
- Ensure correct liners and swabs are in use
- Align correctly mud pump discharge valves
- Use of mechanical lifting equipment

### Required knowledge:

- Mud pumps
- Company and safety guidelines, procedures and practices
- Specified maintenance procedures
- Emergency signals and procedures
- Safe operating procedures when operating equipment.
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management
- Offshore technology

## RANGE STATEMENT

This unit covers the role of an offshore derrickman in operating the mud pumps.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards
- Petroleum regulations



Communications may include:	<ul style="list-style-type: none"><li>• Two-way radio</li><li>• Hand signals</li><li>• Telephone</li><li>• Public address system</li><li>• Written work instructions</li></ul>
Recording requirements can include:	<ul style="list-style-type: none"><li>• Service and maintenance</li><li>• Replacement parts</li><li>• Pump operating logs</li></ul>
Reading materials may include:	<ul style="list-style-type: none"><li>• Job instructions</li><li>• Manufacturers instruction</li></ul>
Weather conditions may include:	<ul style="list-style-type: none"><li>• Sun, rain, wind, storms</li><li>• Hot and cold</li><li>• Calm to severe weather conditions</li><li>• 24 hour operation</li></ul>
Consumables include:	<ul style="list-style-type: none"><li>• Fluid</li><li>• Liner</li><li>• Valves</li><li>• Seats</li><li>• Wear plates</li></ul>
Safety equipment includes:	<ul style="list-style-type: none"><li>• Fire protection</li><li>• First Aid</li><li>• Survival</li></ul>
Discharges may include:	<ul style="list-style-type: none"><li>• Liquids</li><li>• Gases</li><li>• Solids</li></ul>
Materials may include:	<ul style="list-style-type: none"><li>• Flammable</li><li>• Toxic</li><li>• Corrosive</li><li>• Explosive</li><li>• Radioactive</li></ul>
Personal protective equipment may include:	<ul style="list-style-type: none"><li>• Eye protection</li><li>• Hearing protection</li><li>• Gloves</li><li>• Footwear</li><li>• Hard hats</li><li>• Respirators</li></ul>

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Safe operation of mud pump
- Internal workings of mud pumps
- Permit to work and equipment isolation procedure
- Manual handling techniques

### Interdependent assessment of units

- DRTOG11B Prepare and operate drilling fluid systems
- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG19B Operate ancillary equipment
- DRTOG20B Operate and maintain derrick
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGOF20B Monitor, operate and maintain mud pits and equipment

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGOF21B****Unit Descriptor****Operate drilling fluids and mud pits**

This unit has been borrowed from the oil gas sector where it covers the operation of drilling fluids and mud pits as carried out by an offshore derrickman. It also applies to mud specialists' who would work on larger, more complex drilling operations.

**Employability Skills**

This unit contains employability skills.

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |   |
|---|---|
| 1. Plan and prepare for operations.                         | 1.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.2 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.3 Confirm availability and status of necessary permits to work in accordance with operational requirements.<br>1.4 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>1.5 Conform to safe working practices and operational requirements.  |
| 2. Operate mud pits.  | 2.1 Align valves in pits to ensure correct pit usage as directed.<br>2.2 Give safety the highest priority during the operation and entry of mud pits.<br>2.3 Align valves in pits to ensure correct pit usage as directed.<br>2.4 Double check plugs for operation.<br>2.5 Seal or secure tanks to prevent accidental entry.<br>2.6 Set high and low alarms where applicable.<br>2.7 Operate mud pit room ventilation system as required.<br>2.8 Operate hoppers in accordance with operating procedures.<br>2.9 Operate dust extraction system during mixing, if applicable.<br>2.10 Check safety showers and eye washes are accessible and operational.<br>2.11 Supervise forklifts operations.<br>2.12 Store chemicals in appropriate storage area.<br>2.13 Read, interpret and place material Safety Data Sheets (MSDS) in an accessible place. |
| 3. Operate, maintain and repair mud conditioning equipment. | 3.1 Engage and/or adjust appropriate equipment as directed by supervisors or mud engineer.<br>3.2 Clean all equipment and visually inspect for leaks, proper operation, in accordance with company and/or manufacturer's specifications.<br>3.3 Identify faults or potential faults and report immediately.<br>3.4 Perform periodic or scheduled preventative maintenance on all mud treatment units in accordance with company and/or manufacturer's specifications.   |

4. Monitor mud.
  - 4.1 Monitor and record mud properties/parameters.
  - 4.2 Set alarms to monitor mud.
  - 4.3 Check viscosity and weight of mud conform to specifications as directed by mud engineer.
  - 4.4 Maintain appropriate volumes and types of drilling fluids as required by well program or company.
  - 4.5 Use appropriate mixing procedures to obtain desired properties.
  - 4.6 Apply proper safety procedures and equipment for mixing and handling of chemicals.
  - 4.7 Recognise warning signs of a kick and report immediately.

## **REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit.

### **Required skills:**

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller and assistant driller
- Operate equipment in accordance with good oilfield practice and company policy
- Align valves in pits for operability and safety
- Operate and service mud treatment equipment
- Perform periodic or scheduled preventative maintenance on mud condition equipment
- Replace screens and cones on shakers and desilters/desanders
- Operate and service transfer valve
- Weigh mud and perform viscosity checks
- Maintain volumes and types of drilling fluids as required
- Use correct mixing procedures to ensure required properties in drilling fluid
- Use correct safety procedures and equipment for mixing and handling chemicals in accordance with manufacturer's data sheet
- Regularly monitor pit levels, mud properties and cuttings size

### **Required knowledge:**

- Drilling operation
- Functions of the mud pits
- Warning signs of kicks
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures when operating equipment
- Troubleshooting techniques

## RANGE STATEMENT

This unit covers the role of an offshore derrickman in operating the mud pits or a mud specialist in the non-hydrocarbon sector.

Briefings/handover details may include:

- Safety briefing/induction
- Pre-tour safety meeting
- Weekly safety meetings
- Job Safety Analysis (JSA)
- Agreed procedures may include-
  - company
  - facility
  - client
- Toolbox
- Permit to work

Statutory adherence may include:

- (PSLA) Petroleum Submerged Lands Act
- Duty of care
- Australian Standards

Communications may include:

- Alarm systems
- Two-way radio
- Hand signals
- Telephone
- Public address system
- Written work instructions

Recording requirements can include:

- Shaker screens
- Mud properties
- Volume of liquid mud
- Size of cuttings
- Pit level
- Service and maintenance
- Replacement parts
- Chemical stocks

Reading materials may include:

- Job instructions
- Manufacturer's specifications
- Chemical labels
- Material Safety Data Sheet (MSDS)

Numerical calculations may include:

- Mud viscosity
- Mud weight
- Volume
- Uphole velocity
- Quantities
- Pressure
- Water loss

Alarm systems may include:

- Gas
- Fire

Equipment may include:

- Shaker
- Degasser
- Desilter
- Desander
- Mud cleaner
- Agitators

Weather conditions may include:

- Sun, rain, wind, storms
- Hot and cold
- Calm to severe weather conditions
- 24 hour operation

Safety equipment includes:

- Fire protection
- First aid
- Survival

Discharges may include:

- Liquids
- Gases
- Solids
- Dry powder

Materials may include:

- Flammable
- Toxic
- Corrosive
- Explosive
- Radioactive

Personal protective equipment may include:

- Eye protection
- Hearing protection
- Gloves
- Footwear
- Hard hats
- Respirators
- Aprons
- Rubber boots
- Full face visors
- Rubber gloves

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies

Recognised warning signs of a kick are:

- Pit level change is observed and reported immediately
- Mud property change is observed and reported immediately
- Volume of mud change is observed and reported immediately
- Size of cuttings change is observed and reported immediately
- Pump pressure is observed and reported immediately

Alarm systems may include:

- High and low alarm
- Mud density alarm
- Low/high pressure
- Gas
- Fire

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Safety is highest priority during operation and entry of mud pits
- Application of calculations such as-
  - flow rates
  - mud weight, control of pressurised formation
- Adequate training in the use of well control and system procedure
- Ability to adapt to new situations using appropriate strategies (e.g. innovations, persistence, resourcefulness)
- Recognise kick signs
- Inadvertent opening of chump valves
- Well control and system procedure

### Interdependent assessment of units

- DRTOG13B Apply occupational health and safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOG20B Conduct and maintain derrick operations
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGOF20B Monitor, operate and maintain mud pits and equipment
- Relevant non-hydrocarbon units

<b>Resource implications</b>	This unit requires access to the mud operations in a complex drilling operation.
<b>Consistency in performance</b>	Evidence should be available of the ability to operate mud systems in a range of typical complex drilling operations.
<b>Context of assessment</b>	Assessment would typically look for evidence accumulated as a result of operating mud systems in a number of complex drilling operations.



## DRTOGON06B

### Unit Descriptor

### Employability Skills

### Application of the Unit

## Carry out rig lease operations

This unit covers the operation of a rig lease by an onshore leasehand.

This unit contains employability skills.

- **Units replaced:** DRTOGON06A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

### Unit Sector

Oil and Gas

### ELEMENT

### PERFORMANCE CRITERIA

- |  |  |
|--|--|
| 1. Assist drill crew in positioning and recording detail of tubulars.  | 1.1 Place and tier tubulars in appropriate racks.<br>1.2 Measure, label and record tubulars as required.<br>1.3 Operate front end loader in accordance with manufacturers' specifications.   |
| 2. Operate pneumatic and electric power tools as directed.             | 2.1 Wear appropriate protective clothing and equipment.<br>2.2 Use tools in accordance with manufacturer's instructions.   |
| 3. Assist drill crew as directed in running and recovery of BOP stack. | 3.1 Assist operator of air tugger winches as directed.<br>3.2 Assist in positioning BOP, as directed.<br>3.3 Assist crew by supplying tools to the drill floor as required.  |
| 4. Provide labour for loading and unloading transport.                 | 4.1 Use approved safety approach.<br>4.2 Use correct lifting techniques and use forklift a safe manner.  |
| 5. Provide labour for making up drilling mud, as directed.             | 5.1 Comprehend mud material data sheets.<br>5.2 Use protective clothing and equipment in accordance with data sheet recommendations.<br>5.3 Lift sack material correctly.<br>5.4 Use safety equipment correctly in event of personal contact with hazardous materials. |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Report regularly to and work as directed by the driller/derrickman timely and efficiently
- Select and fit correct stinger/slides appropriate for loads
- Transfer equipment by forklift
- Place, measure, label and record details of tubulars
- Operate power and pneumatic tools, wearing appropriate protective clothing
- Assist in running/recovery of BOP stack
- Operate air tugger winch
- Assist in supply of transport equipment to drill floor and loading/unloading
- Assist derrickman in making up drilling mud

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Drill floor operations
- Safe operational practices
- Numerical tasks involving measurement, e.g. tapes, rulers, calibration devices
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore leasehand in operating a rig lease.

Briefings/handover details may include:

- Location of potential hazards
- Pre-tour safety meeting
- Task specific - Job Safety Analysis (JSA)
- Environmental requirements

Statutory adherence may include:

- Occupational Health and Safety Acts and Regulations
- Petroleum regulations
- Environmental regulations
- Safe working procedures
- Protective clothing
- Environmental

Communications may include:

- Two-way radio
- Hand signals
- Verbal
- Written

Reading tasks may include:

- Work schedules
- Manufacturers' instructions
- Mud material data sheets

Weather conditions may include:

- Wet/dry
- Hot/cold
- Storms - dust storms, lightning
- Day/night

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Briefings/handover
- Communications
- Weather conditions
- Current licences for forklift, front end loader

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance
- DRTOGON07B Move loads

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGON07B****Unit Descriptor****Employability Skills****Application of the Unit****Move loads**

This unit covers the moving of equipment using forklifts, cranes and other loading equipment by onshore leasehand.

This unit contains employability skills.

- **Units replaced:** DRTOGON07A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                   |  |
|-----------------------------------|--|
| 1. Plan job.                      | 1.1 Identify potential hazards associated with the use of cranes and other load moving equipment and plan measures to eliminate or control these hazards.<br>1.2 Obtain site information as necessary.<br>1.3 Select optimum prevention/control measures.<br>1.4 Identify adequate site access and egress.<br>1.5 Determine coordination requirements with other site personnel.<br>1.6 Identify appropriate materials, tools and equipment.<br>1.7 Check appropriate approvals for work and persons.<br>1.8 Develop the job method and sequence to include hazard prevention control measures and safety procedures.<br>1.9 Develop the job to include hazard prevention/control measures and to applicable Australian Standards, codes of practice and to equipment manufacturer's specifications. |
| 2. Prepare site for rigging work. | 2.1 Isolate the site using barriers as necessary.<br>2.2 Implement safety procedures including necessary signage.<br>2.3 Where appropriate, assemble and erect lifting or pulling device.  |
| 3. Carry out load movement.       | 3.1 Perform load moving in accordance with planned hazard prevention and control measures, to approved safe work practices, and to appropriate Australian Standards, codes of practice and manufacturer's specifications.<br>3.2 Work safely at heights and/or on uncompleted structures and/or within uncompleted structures and/or in confined and enclosed spaces.<br>3.3 Inspect load connection equipment and where appropriate load movement equipment for safety.<br>3.4 Connect equipment to load to manufacturer's specifications and Australian Standards as appropriate.  |

- |  |   |
|--|---|
| 4. Carry out load movement.                      | <p>4.1 Connect load to movement device with appropriate techniques using appropriate equipment.</p> <p>4.2 Calculate loads and appropriate safe working loads using load charts and standard calculation rules.</p> <p>4.3 Use appropriate communication and signal methods to coordinate the load movement with safety.</p> <p>4.4 Give signals both within sight and out of sight of equipment operator.</p> <p>4.5 Move the load with due regard for load centre of gravity, access, obstacles, wind conditions and final resting position(s).</p> <p>4.6 Follow any specifications given by the designer relative to the load.</p> <p>4.7 Ensure the stability of the load throughout the load movement procedure.</p> <p>4.8 Use load shifting equipment in a manner that maintains adequate stability.</p> <p>4.9 Use rigging gear in accordance with codes of practice and guides.</p> |
| 5. Place and secure the load.                    | <p>5.1 Check and select appropriate materials for fixing and anchoring the load.</p> <p>5.2 Use appropriate fixing methods to secure the load. Load securing may include both temporary and permanent methods including appropriate temporary bracing and load supports.</p> <p>5.3 Install temporary securing where hazards and weather conditions may vary during the load movement and/or construction.</p> <p>5.4 Lower the load safely using appropriate equipment and communication methods.</p> <p>5.5 Follow appropriate designer's specifications during the placement and securing of the load.</p>   |
| 6. Ensure continuing stability.                  | <p>6.1 Follow load movement procedure to ensure load and/or structural stability.</p> <p>6.2 Maintain any temporary bracing and/or load support until continuing stability is ensured.</p> <p>6.3 Follow manufacturer's and/or designer's specifications relating to load stability.</p> <p>6.4 Complete the load and/or structure to manufacturer's, designer's specifications and to appropriate Australian Standards.</p> <p>6.5 Identify local conditions which may affect the continuing stability and take measures to ensure continuing stability.</p>   |
| 7. Dismantle and remove load shifting equipment. | <p>7.1 Dismantle load shifting equipment in a safe and orderly manner.</p> <p>7.2 Take appropriate steps to dismantle and remove items brought on-site during site preparation.</p>   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Rigging procedures
- Safe operational practices
- Conversion between metric and imperial
- Range of numerical calculations and measurements
- Interpretation of graphical representation, e.g. maps, diagrams
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

### Required knowledge:

- Report regularly to and work as directed by the driller/derrickman timely and efficiently
- Apply whippings to end of fibre cordage
- Tie reef knot, clove hitch and rolling hitch in fibre cordage
- Apply back splice, short splice and eye splice in fibre cordage
- Inspect and identify, report and repair faults in hooks, shackles and slings prior to use
- Select correct equipment for pick-up and lay down of tubulars and nubbins

## RANGE STATEMENT

This unit covers the role of an onshore leasehand in planning and preparing work for basic rigging.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environmental
- Petroleum regulations

Communications may include:

- Two-way radio
- Oral instruction

Data to be reviewed for specific information may include:

- Australian Standards for hazard control
- Job schedule/instructions
- Lubrication schedule
- Manufacturers' specifications
- Work specification
- Plans/drawings
- Safe working loads
- Instructions from load designer

Written tasks may include:

- Basic line drawings
- Site sketches
- Inspection/repair records

Range of numerical tasks may include:

- Mass
- Load dimensions
- Safe working load calculations

Reading materials may include:

- Load charts
- Manufacturer/designer specifications
- Appropriate Australian Standards
- Work schedules

Numerical tasks may include:

- Length
- Quantities
- Volume
- Conversion factors

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry

Load connecting to device may include:

- Slings
- Rope
- Shackles
- Eye bolts
- Spreader beams and equalising gear
- Clamps
- Pulley systems
- Chain blocks and pull lifts
- Winches
- Jacks
- Skids, skates and sliding shoes
- Rollers
- Cradle timbers
- Chocks and wedges
- Packers
- Fish-plates and bolts
- Feeler gauges
- Rigging screws
- Turfers
- Turn buckles

Communication signals to coordinate load movement may include but are not limited to:

- Stop
- Raise
- Lower
- Slew - left and right
- Luff - boom up and down
- Extend boom
- Retract boom

Signals for load moving are given using any of the following methods:

- Verbally
- With hand signals to Australian Standards
- With whistles/hooters to Australian Standards
- With two-way radios/telephones
- With light signals to Australian Standards

Equipment range dogging and rigging work is associated with:

- Movement of plant and equipment
- Steel erection
- Particular hoists
- Placement of pre-cast concrete
- Safety nets and static lines
- Mast climbers
- Perimeter safety screens and shutters and
- Cantilevered crane loading platforms

and excludes work including:

- Use of load equalising gear
- Rigging of cranes, conveyors, dredges and excavators
- Tilt-slabs
- All hoists with jibs and self climbing hoists
- Demolition
- Dual lifts
- Rigging of gin poles and shear legs
- Flying jibs and cableways
- Guyed derricks and structures and
- Suspended scaffolds and fabricated hung scaffolds

Recorded information may include:

- Tubulars and equipment
- Faults and defects
- Downhole tools and pipe measurements
- Quantities of lubricants used



**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Current State/Territory Occupational Health and Safety legislation, standards and codes of practice
- The hierarchy of hazard control measures with elimination, substitution, isolation and engineering control measures being selected before safe work practices and personal protective equipment

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG01B Assist with the health and safety of the working environment
- DRTOG02B Assist in maintaining rig safety and emergency procedures
- DRTOG03B Assist in establishing and maintaining effective working relationships
- DRTOG04B Carry out equipment and basic rig maintenance
- DRTOGON06B Carry out rig lease operations

**Underpinning knowledge**

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Rigging procedures
- Safe operational practices
- Conversion between metric and imperial
- Range of numerical calculations and measurements
- Interpretation of graphical representation, e.g. maps, diagrams
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

**Underpinning skills****Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGON15B****Unit Descriptor****Employability Skills****Application of the Unit****Manage subordinates and equipment**

This unit covers the management of subordinates and equipment as carried out by an onshore derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON15A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                     |  |
|-------------------------------------|--|
| 1. Manage subordinates effectively. | 1.1 Conduct pre-job meeting.<br>1.2 Make all members of the team aware of their roles and responsibilities.<br>1.3 Supervise floorhands as directed by the driller/assistant driller.<br>1.4 Assist drilling crew members with training.<br>1.5 Follow and practise proper safety procedures and policies.<br>1.6 Plan work to be performed upon approval of supervisor.<br>1.7 Carry out drilling responsibilities as required. |
| 2. Train subordinates.              | 2.1 Implement company policy, procedure and practices.<br>2.2 Induct new hands in accordance with company and statutory requirements.<br>2.3 Assist subordinates in upgrading their positions.<br>2.4 Assist subordinates in meeting their on-the-job training program requirements.<br>2.5 Instruct crew in the care and handling of derricks.  |
| 3. Maintain logs and records.       | 3.1 Determine range and required frequency of logs and records.<br>3.2 Maintain daily log of drilling fluid properties.<br>3.3 Maintain daily log of drilling chemicals and mud material usage.<br>3.4 Maintain preventative maintenance records.<br>3.5 Maintain log and records of equipment and parts usage.<br>3.6 Complete log records and shift reports accurately and legibly.  |

- |  |   |
|--|---|
| 4. Maintain all equipment in circulation system. | 4.1 Perform and record daily maintenance checks.<br>4.2 Follow manufacturer's recommendations in care of equipment.<br>4.3 Check sensor systems to ensure they are full of fluid and pumped up.<br>4.4 Check detection system, sensing heads and level indicators.<br>4.5 Check cooling system, pony rod wipers, rod packing, etc.<br>4.6 Check shale shaker and screens.<br>4.7 Isolate each mud tank before dumping to avoid mud loss or lost circulation.<br>4.8 Check derrick grits and safety pins.<br>4.9 Check tongline and drilling line.<br>4.10 Examine crown sheaves for wear or damage. |
| 5. Maintain proper communication.                | 5.1 Advise supervisor of all current conditions and any changes.<br>5.2 Use proper hand signals in derrick operations.<br>5.3 Use correct handover procedures with relief.<br>5.4 Place orders for stock or equipment maintenance in advance of need, to ensure continuous availability.  |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Set a good example to other members of the crew
- Anticipate and troubleshoot problems
- Use slack time to keep equipment clean and in good repair
- Be a self-starter and work independently
- Supervise floorhands and assist subordinates in on-the-job training program
- Train drill crew
- Follow and practise correct safety procedures and policies
- Effectively plan work
- Prepare complete and readable reports and maintain logs and records
- Complete calculations and tests
- Communicate appropriately

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Drilling operation (holding valid Well Control Certificate)
- Hand signals between crane operator and derrickman/derrickhand
- Shift handover procedure
- Log maintenance
- Tests and calculations
- Work performance supervision and assessment
- Training
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore derrickman/derrickhand in managing subordinates and equipment.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards
- Pre-tour safety meetings
- Task Specific - Job Safety Analysis (JSA)
- Register of equipment maintenance
- Assist with supervision of crews

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Codes of practice
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals

Communication skills may include:

- Giving instructions
- Providing constructive feedback
- Conducting a meeting

Written tasks may include:

- Mud additive stock control
- Daily logs
- Maintenance checks
- Equipment and spare parts usage

Reading tasks may include:

- Job instructions
- Technical information
- Training materials

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry (dusty)

**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

**Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Maintain equipment
- Manage subordinates
- Obtain Occupational Health and Safety standards and safe work practices
- Train subordinates
- Maintain proper communication
- Ability to complete required documentation legibly and accurately within the specified timeframe

**Interdependent assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGON17B****Unit Descriptor****Employability Skills****Application of the Unit****Prepare and operate drilling fluid systems**

This unit covers the operation of drilling fluid systems as carried out by an onshore derrickman.

This unit contains employability skills.

- **Units replaced:** DRTOGON17A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |  |   |
|--|---|
| 1. Plan and prepare for operations.    | 1.1 Assess geographic layout of the active, reserve and slug pits.<br>1.2 Assess operation of mud mixers, dump valves and equalising valves.<br>1.3 Identify and locate mud pump and discharge system.  |
| 2. Establish operational requirements. | 2.1 Obtain operational instructions and organise the work to be carried out accordingly.<br>2.2 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>2.3 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>2.4 Confirm availability of necessary third party utilities in accordance with operational requirements.<br>2.5 Confirm availability of required quantities and type of consumables against operational requirements.<br>2.6 Identify errors, omissions and shortages and take appropriate remedial action within functional responsibility. |
| 3. Select and test equipment.          | 3.1 Conform to safe working practices and current legislative and operational requirements.<br>3.2 Identify and select equipment appropriate for the work to be performed and conform to operational requirements.<br>3.3 Confirm equipment is functional and fit for the purpose and the environment in which it will be used.<br>3.4 Identify defects in the equipment and take appropriate remedial action within functional responsibility.   |

- 4. Prepare drilling fluids.
  - 4.1 Conform to safe working practices and current legislative and operational requirements.
  - 4.2 Confirm availability of sufficient quantities and types of fluids against operational requirements.
  - 4.3 Confirm tanks and mixing equipment are clean and free from contamination in accordance with instructions.
  - 4.4 Mix and treat fluids in accordance with the specification.
  - 4.5 Obtain samples and correctly label and store according to operational requirements.
  - 4.6 Identify defects in the equipment and take appropriate remedial action within functional responsibility.
- 5. Pump drilling fluids.
  - 5.1 Conform to safe working practices and current legislative and operational requirements.
  - 5.2 Confirm recording and monitoring devices are preset to required parameters.
  - 5.3 Operate equipment in accordance with operational requirements.
  - 5.4 Identify faults and defects accurately and take appropriate remedial action within functional responsibility.
  - 5.5 Operate pipe in the derrick manually and under supervision.
  - 5.6 Grease crown block and identify hanging sheaves.
  - 5.7 Record data accurately at appropriate times and frequencies in accordance with operational requirements.
- 6. Operate hopper system.
  - 6.1 Recognise operation of the hopper system.
  - 6.2 Operate and maintain shale shakers, desilter, desander, degasser, mud cleaner and centrifuge in accordance with company and manufacture's requirements.
  - 6.3 Measure and log mud properties correctly.
  - 6.4 Recognise, record and report changes in returns of drilling fluid and pit volumes.



## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Maintain and operate mud mixers, dump valves and equalising valves in the mud pits system
- Safely add mud materials to the mud systems under the mud engineer's instructions
- Operate and maintain all the mud treatment units
- Accurately take mud properties readings and legibly record them
- Interpret and act on additional flow in the mud returns or an increase in mud pit volume
- Operate pipe in derrick as directed either manually or using hydraulic racking system where fitted
- Assess need and action greasing of crown block and hanging sheaves

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Chemical handling procedures
- Operating principles of the systems equipment and their relationship to other plant
- Fluid types and composition
- Rig safety and emergency procedures
- Safe operating procedures when operating equipment
- Layout of mud circulating, mixing and suction systems
- Geography of active, reserve and slug pits
- Layout of shaker, degasser and settling pits, and sand traps
- Materials Safety Data Sheet (MSDS)
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore floorman in operating drilling fluid systems.

Briefings/handover details may include:

- Pre-tour safety meeting
- Work inspection
- Job Safety Analysis (JSA)
- Tour reports updated
- Permit prepared where applicable
- Safety equipment inspected and used as appropriate

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Code of practice
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Oral instruction
- Written instruction

Weather conditions may include:

- Day/night
- Storm/lightning
- Hot/cold
- Wet/dry

Equipment may include:

- Pumps
- Lines
- Hoppers
- Manifolds
- Solids control equipment
- Gas control equipment

Fluid systems include:

- Mixing
- Transfer
- Bulk
- Circulating

Fluid mix specification includes:

- Volume
- Density
- Viscosity
- Mud properties

Parameters include:

- Flow rate
- Pressure
- Density

Remedial action taken to deal with errors, omissions and shortages may include:

- Report
- Record
- Adjust
- Repair
- Isolate

Working practices may include:

- Individual operation
- Team operation
- Use of personal protective equipment
- Consideration of H<sub>2</sub>S and other toxic substances
- Continuous communication maintained
- Reacting to on-site emergencies
- Dealing with contamination

Preparation may include:

- Geographic layout of the active, reserve and slug pits
- Operation of mud mixers, dump valves and equalising valves
- Mud pump and discharge system
- Mud materials safety data sheets
- Layout of shaker pits, degasser pit, settling pit and sand trap

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Planning and preparation
- Preparation and operation of drilling fluid system
- Comply with safe operating procedures
- Hazard identification and use of PTW system/lookout - tagout

### Interdependent assessment of units

Competence must be assessed and achieved for each unit.

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOGON15B Manage subordinates and equipment
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation.

### Resource implications

Access is required to an operational rig, or appropriate simulations.

### Consistency in performance

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGON18B****Maintain services and operations to meet quality standards****Unit Descriptor**

This unit covers the maintenance of services and operations to meet quality standards by an onshore derrickman/derrickhand.

**Employability Skills**

This unit contains employability skills.

**Application of the Unit**

- **Units replaced:** DRTOGON18A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                      |   |
|--------------------------------------|---|
| 1. Maintain services and operations. | 1.1 Satisfy delivery, quantity and cost requirements on operations and services.<br>1.2 Meet quality, safety and delivery specifications consistently for work activities.<br>1.3 Give information and advice accurately and in line with policy.<br>1.4 Ensure requirements relating to work activities contain all relevant information.<br>1.5 Disseminate requirements relating to work activities correctly to all relevant people.<br>1.6 Carry out all communications in a manner, and at a level and pace likely to promote understanding and effective working relationships.<br>1.7 Pass on information which affects customers and the efficiency of operations and services to the appropriate people.<br>1.8 Note factors which may cause operations to be disrupted and take appropriate measures to minimise their effects.<br>1.9 Complete records related to operations and services accurately and in compliance with requirements.<br>1.10 Implement and maintain systems to monitor quantity, quality, cost and time specifications for service/product delivery correctly.<br>1.11 Pass proposals for improvements in operations and services, when made, to the appropriate people. |
|--------------------------------------|---|

- |  |   |
|--|---|
| 2. Maintain the necessary conditions for an effective and safe work environment. | 2.1 Ensure work conditions and the use of resources satisfy current legislation, approved codes of practice, and organisational requirements.<br>2.2 Keep maintenance procedures in accordance with requirements.<br>2.3 Deal with accidents and incidents effectively and according to legal and organisational requirements and approved codes of practice.<br>2.4 Identify potential or actual breaches of requirements and take the appropriate action.<br>2.5 Pass on recommendations for improving conditions to the appropriate people with minimum delay.<br>2.6 Complete all necessary records accurately, legibly and make available to authorised people with minimum delay.<br>2.7 Maintain health and safety systems and procedures according to requirements and instruct people accordingly.<br>2.8 Maintain security systems and procedures according to requirements.<br>2.9 Inform relevant people of changes in procedures and requirements.<br>2.10 Take action to improve efficiency.<br>2.11 Ensure the work environment is conducive to work activity. |
|--|---|

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Locate and implement company policies, procedures and instruction
- Pass on information accurately and completely
- Complete reports and lodge on time
- Respond to commands or directions

### Required knowledge:

- Occupational Health and Safety obligations
- Company and statutory guidelines, procedures and practices
- Emergency procedures
- Environmental policy
- Understand reporting procedures
- Emergency response procedures
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore derrickman/derrickhand in maintaining services and operations to meet quality standards.

Briefings/handover details may include:

- Work inspection
- Location of potential hazards
- Task specific - Job Safety Analysis (JSA)
- Pre-tour safety meetings
- Delegate and supervision of crews
- Encouraging teamwork and clear communication

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Code of practice
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Oral instruction
- Written instruction

Weather conditions may include:

- Day/night
- Storm/lightning
- Hot/cold
- Wet/dry

Conditions may include:

- Work environment
- Equipment
- Materials
- Procedures
- Special needs

Organisational and legal requirements may include:

- Health, hygiene and safety legislation
- Employment and other legal legislation
- Industry-specific legislation
- Approved codes of practice
- Organisational policies, practices and procedures
- Environmental legislation
- Customer requirements

People to be kept informed may include:

- Those for whom one has responsibility
- Line managers
- Staff representatives
- Colleagues
- Customers
- Suppliers

Records may include:	<ul style="list-style-type: none"> <li>• Written</li> <li>• Computer-based</li> </ul>
Reporting requirements may include:	<ul style="list-style-type: none"> <li>• Oral</li> <li>• Written</li> </ul>
Information may include:	<ul style="list-style-type: none"> <li>• Customer requirements</li> <li>• Performance of services, operations and products in relation to requirements</li> </ul>
Systems to monitor quantity, quality, cost and resource requirements may include:	<ul style="list-style-type: none"> <li>• Quality assurance</li> <li>• Administrative</li> <li>• Process</li> </ul>

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Organisational and legal requirements
- Communications
- Reporting requirements

### Interdependent assessment of units

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOGON15B Manage subordinates and equipment
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON23B Operate mud pumps
- DRTOGON24B Operate mud systems

### Context of assessment

This unit will be assessed on an operational rig, or using a suitable simulation

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.



**DRTOGON23B****Unit Descriptor****Employability Skills****Application of the Unit****Operate mud pumps**

This unit covers the operation of mud pumps as carried out by an onshore derrickman/derrickhand.

This unit contains employability skills.

- **Units replaced:** DRTOGON23A
- **Links to other units:** None
- **Links outside this Training Package:** Nil

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |                                     |  |
|-------------------------------------|--|
| 1. Plan and prepare for operations. | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements. |
| 2. Monitor mud pumps.               | 2.1 Visually inspect and listen to mud pumps for abnormal sounds or noise.<br>2.2 Check piston lubricating system.<br>2.3 Check pop-off valve setting.<br>2.4 Check pressure of suction and discharge dampeners.<br>2.5 Charge discharge dampener with nitrogen, as required.  |
| 3. Maintain and repair mud pumps.   | 3.1 Check pony rod clamp when pump is turned off.<br>3.2 Lubricate gear end of pump and check oil levels in gear end of pump.<br>3.3 Identify faults or potential faults and report immediately.<br>3.4 Identify, record and/or report requirement for repair or maintenance of mud pumps.<br>3.5 Replace defective swabs, liner, valves, seats and wear plates of the fluid end of pump.<br>3.6 Ready replacement parts for fluid end of pump.<br>3.7 Check liners and swabs for correctness.                                 |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Check pumps visually and aurally
- Check piston lubrication system
- Set pop-off valve
- Check pressure of suction and discharge dampeners
- Charge discharge damper with nitrogen
- Check pony rod clamp
- Lubricate and check oil levels in gear end of pump
- Replace swabs, liners, valves, seats and wear plates of fluid end of pump
- Prepare replacement parts for fluid end
- Ensure correct liners and swabs are in use
- Align correctly mud pump discharge valves

### Required knowledge:

- Mud pumps
- Company and statutory safety guidelines, procedures and practices
- Emergency signals and procedures
- Safe operating procedures when operating equipment
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore derrickman/derrickhand in operating the mud pumps.

Briefings/handover details may include:

- Review of operational requirements
- Maintenance and inspection of pumping equipment
- Maintain fluid system to pumps
- Review PTW requirements
- Pre-tour safety meeting
- Review of relative Job Safety Analysis (JSA)

Statutory adherence may include:

- Occupational Health and Safety
- Duty of care
- Environment
- Codes of practice
- Australian Standards
- Petroleum regulations

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals

Reading materials may include:

- Job instructions
- Manufacturers' instructions

Recording requirements can include:

- Service and maintenance
- Replacement and parts
- Pump operating logs

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry (dusty)

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### Critical aspects of evidence to be considered

It is essential that competence is fully observed in the critical aspects of:

- Preparation and maintenance of all pumping equipment
- Maintenance of fluid system to supply pumps
- Establish clear communication with driller and ability to follow instructions
- Comply with safe operating procedures
- Hazard identification and use of PTW system/lockout - tagout

**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply Occupational Health and Safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOGON15B Manage subordinates and equipment
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON24B Operate mud systems

**Context of assessment**

This unit will be assessed on an operational rig, or using a suitable simulation.

**Resource implications**

Access is required to an operational rig, or appropriate simulations.

**Consistency in  
performance**

Consistent performance is required and evidence should be available of consistent performance under a range of situations.

**DRTOGON24B****Unit Descriptor****Operate mud systems**

This unit has been borrowed from the oil gas sector where it covers the operation of drilling fluids and mud pits as carried out by an offshore derrickman. It also applies to mud specialists' who would work on larger, more complex drilling operations.

**Employability Skills**

This unit contains employability skills.

**Unit Sector**

Oil and Gas

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Plan and prepare for operations.                             | 1.1 Conform to safe working practices and current legislative and operational requirements.<br>1.2 Obtain operational instructions and organise the work to be carried out accordingly.<br>1.3 Clarify difficulties in carrying out the instructions with the relevant personnel.<br>1.4 Confirm availability and status of necessary permits to work in accordance with operational and legislative requirements.<br>1.5 Confirm availability of necessary third party utilities in accordance with operational requirements.   |
| 2. Operate mud system.  | 2.1 Ensure compliance with good oilfield practice and company policy when operating equipment.<br>2.2 Align valves in pits to ensure correct pit usage as directed.  |
| 3. Operate, maintain and repair mud conditioning equipment.     | 3.1 Engage and/or adjust appropriate equipment as directed by supervisors or mud engineer (e.g. shaker, degasser, desilter, desander, mud cleaner, agitators).<br>3.2 Clean all equipment and visually inspect for leaks, proper operation, and so on, in accordance with company and/or manufacturer's specifications.<br>3.3 Identify faults or potential faults and reported immediately.<br>3.4 Identify, record and report requirement for repair or maintenance of mud conditioning equipment.<br>3.5 Replace screens or cones as necessary, on shakers, desilters, desanders in accordance with company and/or manufacturer's specifications.<br>3.6 Perform periodic or scheduled preventative maintenance on all mud treatment units in accordance with company and/or manufacturer's specifications. |
| 4. Operate and service transfer (butterfly) valves in mud pits. | 4.1 Align valves as appropriate.<br>4.2 Lubricate valve stems of butterfly valves as appropriate.<br>4.3 Clean and inspect transfer valves when pits are empty.<br>4.4 Replace or repair defective parts as necessary.   |
| 5. Recognise warning signs of kicks.                            | 5.1 Monitor, adjust and report pit level.<br>5.2 Monitor and report mud properties.<br>5.3 Monitor and report size of cuttings.<br>5.4 Monitor and report volume of mud returns.   |

## REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

### Required skills:

- Recognise and report equipment malfunction or failure
- Supervise and train subordinates to provided standards
- Work as directed by driller timely and efficiently
- Operate equipment in accordance with good oilfield practice and company policy
- Align valves in pits to ensure correct pit usage
- Operate mud condition equipment, including shakers, degasser, desilter, desander, mud cleaner and agitators
- Perform periodic or scheduled preventative maintenance on mud condition equipment
- Replace screens and cones on shakers and desilters/desanders
- Operate and service transfer valve
- Weight mud for viscosity check
- Maintain volumes and types of drilling fluids as required
- Use correct mixing procedures to ensure required properties in drilling fluid
- Use correct safety procedures and equipment for mixing and handling chemicals in accordance with manufacturer's data sheet
- Regularly monitor pit levels, mud properties and cuttings size

### Required knowledge:

- Drilling operation
- Functions of the mud pits
- Warning signs of kicks
- Company and statutory safety guidelines, procedures and practices
- Safe operating procedures when operating equipment
- AOA policy procedure and practices
- Rig maintenance
- Normal drilling operations
- Non-routine drilling operations
- Man management/rig management

## RANGE STATEMENT

This unit covers the role of an onshore derrickman/derrickhand in operating the mud system.

Briefings/handover details may include:

- Review of operational requirements
- Maintenance and inspection of pumping equipment
- Maintenance fluid system to pumps
- Review PTW requirements
- Pre-tour safety meeting
- Review of relative Job Safety Analysis (JSA)
- Maintenance and operation of solids control equipment

Statutory adherence may include:

- Occupational health and safety
- Duty of care
- Environment
- Codes of practice
- Australian Standards

Communications may include:

- Two-way radio
- Intercom
- Telephone
- Written instruction
- Oral instruction
- Hand signals

Reading materials may include:

- Job instructions
- Manufacturer's instructions

Numerical calculations may include:

- Viscosity
- Mud weight
- Volume
- Up hole velocity
- Quantities
- Pressure

Recording requirements may include:

- Mud test recording
- Pit level
- Service and maintenance
- Replacement parts

Weather conditions may include:

- Day/night
- Storms and lightning
- Hot/cold
- Wet/dry (dusty)

## EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

### **Critical aspects of evidence to be considered**

It is essential that competence is fully observed in the critical aspects of:

- Recognising warning signs of kicks
- Align mud system for required operations
- Prepare, measure and monitor mud properties
- Report and record on mud chemical usage
- Comply with safety procedures and use of personal protective equipment
- Application of calculations such as flow rate, control of pressurised formations

**Interdependent  
assessment of units**

Competence must be assessed and achieved for each unit:

- DRTOG13B Apply occupational health and safety in the workplace
- DRTOG14B Control emergencies and critical situations
- DRTOGON15B Manage subordinates and equipment
- DRTOG15B Create, maintain and enhance productive working relationships
- DRTOGON17B Prepare and operate drilling fluid systems
- DRTOGON18B Maintain services and operations to meet quality standards
- DRTOG19B Operate and maintain ancillary equipment
- DRTOG20B Conduct and maintain derrick operations
- DRTOG21B Trip casing
- DRTOG22B Trip pipe
- DRTOGON23B Operate mud pumps
- Relevant non-hydrocarbon units

**Resource implications**

This unit requires access to the mud systems of a complex drilling job.

**Consistency in  
performance**

Evidence should be available of the competent operation of mud systems in a range of complex jobs, or competent operation of a mud system on a single complex job over an extended period of time.

**Context of assessment**

Assessment should focus on evidence produced by operation of mud systems on complex drilling jobs.



**BSBMGT603A****Unit Descriptor****Review and develop business plans**

This unit covers those areas of business planning and system review undertaken by an operational manager and incorporates the development of various tactical and operational plans incorporating risk management plans.

Consider co-assessment with BSBMGT604A Manage business operations.

**Competency Field**

Business Management Services

**ELEMENT****PERFORMANCE CRITERIA**

1. Develop tactical and operational plans

- 1.1 Pre-existing *tactical and operational plans* have been reviewed and evaluated
- 1.2 Strategic objectives are analysed, interpreted and relevant operational objectives are developed
- 1.3 *Project management protocols* for the organisation are developed
- 1.4 Consultation with appropriate groups and individuals is built into plans
- 1.5 Requirements of internal/external customers are identified through consultation and documented
- 1.6 Plans include methods for measuring customer satisfaction and obtaining feedback
- 1.7 Operational performance objectives, measures and criteria are developed through consultation with relevant groups and individuals
- 1.8 Tactical and operational plans identify financial, human and physical resource requirements
- 1.9 Scheduling of activities meets customer/marketing requirements
- 1.10 Plans contain clear profitability, productivity and performance targets for key result areas (e.g. OHS, environment, quality, customer service)
- 1.11 Plans are concise, logical and comply with organisation requirements
- 1.12 Plans address all relevant operational issues, including internal/external environmental factors
- 1.13 *Tactical and operational plans* have been subject to risk assessment and analyses, and include *risk management plans*

2. Review business systems
- 2.1 Reviews are undertaken regularly of the implementation of tactical and operational plans
  - 2.2 Information/reports are available to compare plans, budgets and forecasts to actual performance
  - 2.3 *Systems* are reviewed in consultation with users and people responsible for implementing the business plans
  - 2.4 *Systems* provide for identification of system variance or failure, to allow early intervention and prompt remediation
  - 2.5 *Systems* monitor resource usage in a timely manner
  - 2.6 *Systems* allow for flexible responses to changing and emerging situations
  - 2.7 *Systems* are in place to provide feedback to relevant groups and individuals on their performance
  - 2.8 *Systems* provide for immediate response to incidents involving potential risk to people, product or the environment
  - 2.9 *Systems* are designed to achieve the organisation's energy saving targets

## KEY COMPETENCIES

NB: These levels do not relate to the Australian Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	to internal/external customers and review systems	3
Collecting analysing and organising information	to prepare the tactical and operational plans	3
Planning and organising activities	to develop plans and review/redesign systems	3
Working with others and in teams	to consult with them and obtain their input into planning and system review activities	3
Using mathematical ideas and techniques	to ensure appropriate measurement activities are in place	2
Solving problems	to improve existing systems and achieve tactical/operational objectives	3
Using technology	to improve system's performance	2

## RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit:

Legislation, codes and national standards relevant to the workplace which may include:

- award and enterprise agreements and relevant industrial instruments
- relevant legislation from all levels of government that affects business operation, especially in regard to Occupational Health and Safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- relevant industry codes of practice

Tactical and operational plans means:

- plans to fine-tune a strategy. It involves less organisational resources and is usually relatively easy to implement or reverse. They include the plans for specific tactical responses to the marketplace and the day-to-day plans associated with the production and delivery of a product or service

Project management protocols means:

- the rules of behaviour relating to the development, planning, approval, implementation, management and evaluation of projects

Risk management means:

- the process of identification of potential negative events and the development of plans to mitigate or minimise the likelihood of the negative event occurring and/or the consequences in the event it does occur

Systems means:

- a detailed description/depiction of how organisations relate to their environments and how they process information through strategic and tactical management to develop actual operating procedures

Electronic commerce refers to:

- business-to-business, business-to-consumer, government to business activities conducted via electronic communication methodologies and networks
- cost centre/department - to cost centre/department

**EVIDENCE GUIDE**

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statement.

**Critical Aspects of Evidence**

- Assessment for this unit will need to occur over a sufficient period of time to allow an holistic assessment of the tactical and operational planning activities
- Plans developed must meet the organisation's criteria as well as those set down in the unit
- Systems review and revision is a crucial aspect of the business planning process and needs to be clearly evidenced

**OHS considerations may include:**

- review and evaluation of previous OHS plans and programs
- implementation of OHS systems for projects
- use of participative arrangements for review of OHS in operational performance
- development and review of OHS performance targets
- framework and components of OHS management system, its structures and performance
- systemic review procedures

**Underpinning Knowledge**

- Relevant legislation from all levels of government that affects business operation, especially in regard to Occupational Health and Safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- Strategic planning
- All legislation relevant to the organisation's operation
- Critical path/PERT methodology
- Relevant industrial awards and agreements
- Electronic commerce systems
- Consultative methods and processes
- Performance measurement and benchmarking methodology
- Operations management
- High reliability organisational concepts
- Energy management
- Capital investment evaluative methodology including NPV and ROI

At this level the learner must demonstrate understanding of specialised knowledge with depth in some areas.

**Underpinning Skills**

- Analytical skills to interpret strategic objectives and develop tactical and operational objectives
- Communication/consultation skills to ensure all relevant groups and individuals are advised of what is occurring and are provided with an opportunity for input
- Risk management skills to analyse, identify and develop mitigation strategies for identified risks
- Systems analysis and design skills to ensure that system outputs meet tactical/operational objectives and measure performance in a timely way
- Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

**Resource Implications**

The learner and trainer should have access to appropriate documentation and resources normally used in the workplace

**Consistency of Performance**

In order to achieve consistency of performance, evidence should be collected over a set period of time which is sufficient to include dealings with an appropriate range and variety of situations

**Context/s of Assessment**

- Competency is demonstrated by performance of all stated criteria, including paying particular attention to the critical aspects and the knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statement
- Assessment must take account of the endorsed assessment guidelines in the Business Services Training Package
- Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment
- Assessment should reinforce the integration of the key competencies and the business services common competencies for the particular AQF level. Refer to the Key Competency Levels earlier in this unit

**BSBMGT604A****Unit Descriptor****Manage business operations**

The unit covers those activities required of a manager running a business operation and links closely with the business planning units. The emphasis is on the implementation of plans and the monitoring and response to systems failures.

This unit is the implementation of the work done in BSBMGT603A Review and develop business plans; co-assessment should be strongly considered.

Consider co-assessment also with BSBMGT606A Manage customer focus and BSBMGT609A Manage risk.

**Competency Field**

Business Management Services

**ELEMENT****PERFORMANCE CRITERIA**

- |   |  |
|---|--|
| 1. Implement tactical and operational plans | 1.1 <i>Supply chains</i> of resources to organisation or department established and operating effectively<br>1.2 Requirements for skilled labour are met in accordance with plans<br>1.3 Activities are brought on line in accordance with scheduling requirements of plans<br>1.4 <i>Preventative and breakdown maintenance arrangements</i> for business systems are integrated into operations<br>1.5 Cost maintenance and control systems are implemented<br>1.6 <i>Performance measurement systems</i> are tested and operational<br>1.7 Projects are commenced consistent with the project management plan<br>1.8 Co-ordination of people, resources and equipment provide <i>optimum results</i><br>1.9 Products/services meet <i>quality</i> and functional specifications<br>1.10 Communication/consultation is undertaken according to plans<br>1.11 Implementation is consistent with business and strategic plans in place |
| 2. Monitor performance                      | 2.1 Performance indicators and criteria for assessment are confirmed and in place<br>2.2 Indicators/criteria are consistent with organisational objectives and planned outcomes<br>2.3 Projects are managed in accordance with established <i>project management protocols</i><br>2.4 <i>Timely</i> reports on all key aspects of the business are available and user-friendly, and balanced in terms of financial and non financial performance<br>2.5 System failures, product failures and variances to plan are reported as they occur   |

- |                                |  |
|--------------------------------|--|
| 3. Respond to performance data | 3.1 Relevant performance reports are identified and analysed in detail<br>3.2 System specifications and protocols are reviewed to eliminate future failure<br>3.3 Groups and individuals contributing to under-performance are <i>coached</i> , and training provided where appropriate<br>3.4 System processes and work methods are regularly reviewed as part of continual improvement |
|--------------------------------|--|

## KEY COMPETENCIES

NB: These levels do not relate to the Australian Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	to ensure that all appropriate individuals understand the plans and systems	3
Collecting analysing and organising information	to ensure plans in place meet all quality requirements	3
Planning and organising activities	to review systems and processes to achieve continuous improvement	3
Working with others and in teams	to ensure that they are pro-active in the management of the operations	3
Using mathematical ideas and techniques	to analyse system/product failures	2
Solving problems	to eliminate any negative variances to the plan	3
Using technology	to improve system processes and work methods wherever appropriate	2

## RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit:

Legislation, codes and national standards relevant to the workplace which may include:

- award and enterprise agreements and relevant industrial instruments
- relevant legislation from all levels of government that affects business operation, especially in regard to Occupational Health and Safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- relevant industry codes of practice

Supply chains means:	<ul style="list-style-type: none"><li>• a network of facilities that procures raw materials, transforms them into intermediate products (or services) and then finished goods (or services), and delivers them through a distribution system. It spans procurement, production and distribution; views them not as discrete elements but interlinked</li></ul>
Preventative and breakdown maintenance arrangements may include:	<ul style="list-style-type: none"><li>• programmed maintenance</li><li>• preventative maintenance plans</li><li>• emergency response plans</li></ul>
Performance measurement systems means:	<ul style="list-style-type: none"><li>• those systems designed to collect quantitative and qualitative indicators of performance in all of the Key Result Areas for the organisation so as to identify and remediate variances to plans</li></ul>
Optimum results means:	<ul style="list-style-type: none"><li>• that the best overall mix of results is achieved across the organisation's Key Result Areas. Outcomes are measured within the applicable constraints</li></ul>
Quality means:	<ul style="list-style-type: none"><li>• meeting all quality assurance specifications of the organisation</li></ul>
Project management protocols means:	<ul style="list-style-type: none"><li>• the rules of behaviour relating to the development, planning, approval, implementation, management and evaluation of projects</li></ul>
Timely means:	<ul style="list-style-type: none"><li>• in accordance with time limits established in the operational planning process</li></ul>
Coaching refers to:	<ul style="list-style-type: none"><li>• informal on-the-job and off-the-job advice and training to improve performance</li></ul>



## EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statement.

### Critical Aspects of Evidence

- The evidence must cover the translation of the plans previously developed, into workable activities or projects
- There must be evidence of a systematic value chain analysis of all of the support activities of the business and the outcomes of that analysis being translated into action
- Evidence of risk management and evaluation of performance leading to effective remediation also needs to be present

### OHS considerations may include:

- review of OHS records and performance management measures
- establishment and maintenance of OHS risk management approaches
- systemic use of hierarchy of control measures
- establishment and maintenance of OHS systems for project management

### Underpinning Knowledge

- Relevant legislation from all levels of government that affects business operation, especially in regard to Occupational Health and Safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- Strategic planning
- All legislation relevant to the organisation's operation
- Critical path/PERT methodology
- Relevant industrial awards and agreements
- Electronic commerce systems
- Consultative methods and processes
- Performance measurement and benchmarking methodology
- Operations management
- High reliability organisational concepts
- Energy management
- Capital investment evaluative methodology including NPV and ROI

At this level the learner must demonstrate understanding of specialised knowledge with depth in some areas.

## **Underpinning Skills**

- Analytical and evaluative skills to assess supply chain performance
- Performance measurement skills to develop and manage key performance indicators
- Planning and co-ordination skills to ensure the people resources and equipment work in a functional manner to achieve optimum results
- Communication/consultation skills to ensure all relevant groups and individuals are advised of what is occurring and are provided with an opportunity for input
- Project management skills to ensure project objectives, outcomes and outputs are delivered on time, within budget, and incident free
- Communication and report writing skills to keep all internal customers informed of activities and developments
- Systems analysis and design skills to ensure that system outputs meet tactical/operational objectives and measure performance in a timely way
- Coaching and training skills to remediate any under-performance present in the work group or individuals
- Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

## **Resource Implications**

The learner and trainer should have access to appropriate documentation and resources normally used in the workplace

## **Consistency of Performance**

In order to achieve consistency of performance, evidence should be collected over a set period of time which is sufficient to include dealings with an appropriate range and variety of situations

## **Context/s of Assessment**

- Competency is demonstrated by performance of all stated criteria, including paying particular attention to the critical aspects and the knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statement
- Assessment must take account of the endorsed assessment guidelines in the Business Services Training Package
- Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment
- Assessment should reinforce the integration of the key competencies and the business services common competencies for the particular AQF level. Refer to the Key Competency Levels earlier in this unit



**Australian Government**  
**Department of Education,  
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**DRT03 Drilling Training Package**  
**Oil and gas sector competency standards and Advanced  
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