



Australian Government

**Department of Education,
Science and Training**

DRT03 Drilling Training Package

Volume 1 of 3

Version Number: 2
Review Date: 31 December 2006

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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 1 of 3 Introduction, Qualifications Framework and Assessment Guidelines

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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Published by:

First published: 1 December 2003

ISBN: 0 642 80084 7

Printed by:

AEShareNet Code: P

Print Version No: 2

Release Date: TBA

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Preliminary Information

Important Note to Users

Training Packages are not static documents; they are amended periodically to reflect the latest industry practices and are version controlled. It is essential that the latest version is always used.

Check the version number before commencing training or assessment

This Training Package is Version 2 - check whether this is the latest version by going to the National Training Information Service (www.ntis.gov.au) and locating information about the Training Package. Alternatively, contact Resources and Infrastructure Industry Skills Council at <http://www.riisc.com.au> to confirm the latest version number.

Explanation of version number conventions

The primary release Training Package is Version 1. When changes are made to a Training Package, sometimes the version number is changed and sometimes it is not, depending on the extent of the change. When a Training Package is reviewed it is considered to be a new Training Package for the purposes of version control, and is Version 1. Do not confuse the version number with the Training Packages national code (which remains the same during its period of endorsement).

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">• Inclusion of Employability Skills in all DRT units of competency• Inclusion of mandatory texts• Deletion of Key Competencies in all DRT units of competency• Correction of typing errors• Inclusion of coal seam methane units ie:<ul style="list-style-type: none">• DRTOG55A Support blow out prevention operations• DRTOG56A Assist with coal seam gas control• DRTOG57A Apply effective coal seam gas control practices• DRTOG58A Apply blow out prevention operational procedures• Revised and recoded the following to cover coal seam gas:<ul style="list-style-type: none">• DRTNHB49A Plan drilling to DRTNHB49B Plan drilling (Vol II/page 801); Range Statement amended to cover coal seam methane drilling.• 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.

Version	Release Date	Comments
		<ul style="list-style-type: none"> Corrected unit code from MNMOCC418A Transport plant and equipment to MNMOCC1418A Transport plant and equipment (Vol II/page 239). 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 Deleted unit MNMMNI303A Handle and transport explosives and replaced it with unit MNMUGC441A Handle and transport explosives (Vol II/page 483). 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"> DRT30503 Cert III in Drilling - Mineral Exploration DRT40503 Cert IV in Drilling - Mineral Exploration BSZ units replaced with TAA units (Standard 7.3 in Assessment Guidelines) (Vol 1/page 173) Updated references to MNC98, MNQ98 and MNM99 to reflect current Training Packages ie MNC04, MNQ03 & MNM05 in a number of qualifications Deletion of Rationale boxes in all qualifications <p>Changes to qualifications</p> <ul style="list-style-type: none"> DRT20503 Certificate II in Drilling - Mineral Exploration (Vol 1/page 101) (no change in code and title): <p>2 new units added:</p> <ol style="list-style-type: none"> DRTOG55A Support blow out prevention operations DRTOG56A Assist with gas seam control <ul style="list-style-type: none"> DRT30503 Certificate III in Drilling - Mineral Exploration (Vol 1/page 103) (no change in code & title): <p>2 pairs of Method units added:</p> <ol style="list-style-type: none"> DRTNHB13A Assist guided boring DRTNHB32A Conduct guided boring DRTNHB14A Assist directional drilling DRTNHB33A Conduct directional drilling <p>2 new units added:</p> <ol style="list-style-type: none"> DRTOG55A Support blow out prevention operations DRTOG56A Assist with gas seam control <ul style="list-style-type: none"> DRT40503 Certificate IV in Drilling - Mineral Exploration

Version	Release Date	Comments
		<p>(Vol/page 105) (no change in code & title):</p> <p>2 pairs of Method units added:</p> <ol style="list-style-type: none"> 1. DRTNHB13A Assist guided boring 2. DRTNHB32A Conduct guided boring 1. DRTNHB14A Assist directional drilling 2. DRTNHB33A Conduct directional drilling <p>1 existing new version unit added:</p> <p>DRTOG30C Carry well control and blow out prevention</p> <p>2 new units added:</p> <ol style="list-style-type: none"> 1. DRTOG57A Apply effective coal seam gas control 2. DRTOG58A Apply blow out prevention operational procedures <p>1 existing unit added:</p> <p>DRTOGOF21B Operate drilling fluids and mud pits</p> <ul style="list-style-type: none"> • DRT50503 Diploma of Drilling - Mineral Exploration (Vol 1/page 107) (no change in code & title) <p>1 existing new version unit amended:</p> <p>DRTNHB49B Plan Drilling</p> <p>This unit was also amended in the following qualifications:</p> <p>50103 50603</p> <p>50203 50703</p> <p>50303 51003</p> <p>50403 51103</p> <p>2 pairs of Method units added:</p> <ol style="list-style-type: none"> 1. DRTNHB13A Assist guided boring 2. DRTNHB32A Conduct guided boring 1. DRTNHB14A Assist directional drilling 2. DRTNHB33A Conduct directional drilling <p>1 existing new version unit added:</p> <p>DRTOG30C Carry well control and blow out prevention</p> <p>2 new units added:</p> <ol style="list-style-type: none"> 1. DRTOG57A Apply effective coal seam gas control 2. DRTOG58A Apply blow out prevention operational procedures <p>2 existing units added:</p> <p>DRTOGOF21B Operate drilling fluids and mud pits</p>

Version	Release Date	Comments
		DRTOGON24B Operate mud systems
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 Package and will constitute all detail available to identify changes.

Summary of AQF qualifications in this Training Package

Code	Title
DRT20103	Certificate II in Drilling - Environmental
DRT20203	Certificate II in Drilling - Foundation/Construction
DRT20303	Certificate II in Drilling - Geotechnical
DRT20403	Certificate II in Drilling - Trenchless Technology
DRT20503	Certificate II in Drilling - Mineral Exploration
DRT20603	Certificate II in Drilling - Mineral Production and Development
DRT20703	Certificate II in Drilling - Blast Hole
DRT20803	Certificate II in Drilling - Oil/Gas Off shore
DRT20903	Certificate II in Drilling - Oil/Gas On shore
DRT21003	Certificate II in Drilling - Seismic
DRT21103	Certificate II in Drilling - Water Well
DRT30103	Certificate III in Drilling - Environmental
DRT30203	Certificate III in Drilling - Foundation/Construction
DRT30303	Certificate III in Drilling - Geotechnical
DRT30403	Certificate III in Drilling - Trenchless Technology
DRT30503	Certificate III in Drilling - Mineral Exploration
DRT30603	Certificate III in Drilling - Mineral Production and Development
DRT30703	Certificate III in Drilling - Blast Hole
DRT30803	Certificate III in Drilling - Oil/Gas Off shore
DRT30903	Certificate III in Drilling - Oil/Gas On shore
DRT31003	Certificate III in Drilling - Seismic
DRT31103	Certificate III in Drilling - Water Well
DRT40103	Certificate IV in Drilling - Environmental
DRT40203	Certificate IV in Drilling - Foundation/Construction
DRT40303	Certificate IV in Drilling - Geotechnical
DRT40403	Certificate IV in Drilling - Trenchless Technology
DRT40503	Certificate IV in Drilling - Mineral Exploration

Code	Title
DRT40603	Certificate IV in Drilling - Mineral Production and Development
DRT40703	Certificate IV in Drilling - Blast Hole
DRT40803	Certificate IV in Drilling - Oil/Gas Off shore
DRT40903	Certificate IV in Drilling - Oil/Gas On shore
DRT41003	Certificate IV in Drilling - Seismic
DRT41103	Certificate IV in Drilling - Water Well
DRT50103	Diploma of Drilling - Environmental
DRT50203	Diploma of Drilling - Foundation/Construction
DRT50303	Diploma of Drilling - Geotechnical
DRT50403	Diploma of Drilling - Trenchless Technology
DRT50503	Diploma of Drilling - Mineral Exploration
DRT50603	Diploma of Drilling - Mineral Production and Development
DRT50703	Diploma of Drilling - Blast Hole
DRT50803	Diploma of Drilling - Oil/Gas Off shore
DRT50903	Diploma of Drilling - Oil/Gas On shore
DRT51003	Diploma of Drilling - Seismic
DRT51103	Diploma of Drilling - Water Well
DRT60103	Advanced Diploma of Drilling Management

Units of competency in this Training Package and their prerequisites

Code	Title	Prerequisite
DRTNHB01A	Follow workplace health, safety and environment procedures	None
DRTNHB02A	Follow underground health and safety procedures	DRTNHB01A
DRTNHB03A	Work effectively in the drilling industry	None
DRTNHB04A	Work in a drilling team	None
DRTNHB05A	Mobilise equipment and materials	None
DRTNHB06A	Set up/pack up drill site	DRTNHB01A DRTNHB03A
DRTNHB07A	Support drilling process	DRTNHB01A DRTNHB04A
DRTNHB08A	Assist air drilling	None
DRTNHB09A	Assist continuous flight auger drilling	DRTNHB01A DRTNHB07A
DRTNHB10A	Assist large diameter auger drilling	DRTNHB01A DRTNHB07A
DRTNHB11A	Assist conventional core drilling	None
DRTNHB12A	Assist wireline core drilling	None
DRTNHB13A	Assist guided boring	None
DRTNHB14A	Assist directional drilling	None
DRTNHB15A	Assist mud rotary drilling	None
DRTNHB16A	Assist raiseboring	DRTNHB01A DRTNHB07A
DRTNHB17A	Assist cable tool drilling	None
DRTNHB18A	Assist down hole hammer drilling	DRTNHB20A
DRTNHB19A	Assist top hole hammer drilling	None
DRTNHB20A	Set up and prepare for drilling operations	DRTNHB01A DRTNHB06A
DRTNHB21A	Run on-site operations	DRTNHB01A DRTNHB07A
DRTNHB22A	Carry out operational maintenance	None

Code	Title	Prerequisite
DRTNHB23A	Carry out informal on the job training	None
DRTNHB24A	Construct monitoring bores	DRTNHB01A
DRTNHB25A	Construct single aquifer production bores	DRTNHB01A
DRTNHB26A	Construct multiple aquifer production bores	DRTNHB01A
DRTNHB27A	Conduct air drilling	DRTNHB20A DRTNHB22A
DRTNHB28A	Conduct continuous flight auger drilling	DRTNHB20A
DRTNHB29A	Conduct large diameter auger drilling	DRTNHB20A
DRTNHB30A	Conduct conventional core drilling	DRTNHB20A
DRTNHB31A	Conduct wireline core drilling	DRTNHB20A
DRTNHB32A	Conduct guided boring	DRTNHB20A
DRTNHB33A	Conduct directional drilling	DRTNHB20A
DRTNHB34A	Conduct reaming	DRTNHB20A
DRTNHB35A	Install product pipe	DRTNHB20A
DRTNHB36A	Conduct mud rotary drilling	DRTNHB20A
DRTNHB37A	Conduct raiseboring	DRTNHB20A
DRTNHB38A	Conduct cable tool drilling	DRTNHB20A
DRTNHB39A	Conduct down hole hammer drilling	DRTNHB20A
DRTNHB40A	Conduct top hole hammer drilling	DRTNHB20A
DRTNHB41A	Manage non-routine, complex technical situations	DRTNHB01A
DRTNHB42A	Manage mobilisation of equipment and materials	None
DRTNHB43A	Manage on-site operations	DRTNHB01A DRTNHB07A
DRTNHB44A	Construct artesian (flowing) aquifer production bores	DRTNHB01A
DRTNHB45A	Construct geothermal wells	DRTNHB01A
DRTNHB46A	Maintain effective team/crew operations	None
DRTNHB47A	Manage equipment maintenance	None
DRTNHB48A	Manage financial resources	None

Code	Title	Prerequisite
DRTNHB49B	Plan drilling	None
DRTNHB50A	Manage business operations	None
DRTNHB51A	Manage human resources	None
DRTNHB52A	Manage client services	None
DRTNHB53A	Manage non-routine, complex situations	None
DRTOG01B	Assist with the health and safety of the working environment	None
DRTOG02B	Assist in maintaining rig safety and emergency procedures	None
DRTOG03B	Assist in establishing and maintaining effective working relationships	None
DRTOG04B	Carry out equipment and basic rig maintenance	None
DRTOG08B	Contribute to the health and safety of the working environment	None
DRTOG09B	Contribute to the control of emergencies and critical situations	None
DRTOG10B	Establish and maintain effective working relationships	None
DRTOG11B	Prepare and operate drilling fluid systems	None
DRTOG12B	Perform rig floor operations	None
DRTOG13B	Apply occupational health and safety in the workplace	None
DRTOG14B	Control emergencies and critical situations	None
DRTOG15B	Create, maintain and enhance productive working relationships	None
DRTOG19B	Operate and maintain ancillary equipment	None
DRTOG20B	Conduct and maintain derrick operations	None
DRTOG21B	Trip casing	None
DRTOG22B	Trip pipe	None
DRTOG25B	Maintain standard procedures and safe working practices	None
DRTOG26B	Rig up	None
DRTOG27B	Conduct pre-spud operations	None
DRTOG28B	Conduct drilling operations	None

Code	Title	Prerequisite
DRTOG29B	Perform drilling calculations and reporting	None
DRTOG30C	Carry out well control and blowout prevention	None
DRTOG31B	Shut down rig	None
DRTOG32B	Participate in nipping-up and pressure test	None
DRTOG33B	Maintain drilling rig communications systems	None
DRTOG34B	Manage equipment maintenance	None
DRTOG35B	Maintain man management systems	None
DRTOG36B	Coordinate air drilling operations	None
DRTOG37B	Participate in, lead and facilitate work teams	None
DRTOG38B	Manage rig operations	None
DRTOG39B	Plan and evaluate rig operations	None
DRTOG40B	Oversee drilling operations	None
DRTOG41B	Manage drilling operations	None
DRTOG42B	Manage drilling induction and orientation	None
DRTOG43B	Manage rig move and camp move	None
DRTOG44B	Manage and monitor rig-up and rig-up to spud operations	None
DRTOG45B	Manage well completion and abandonment	None
DRTOG52B	Implement and maintain statutory/legal compliance system	None
DRTOG53B	Implement and maintain occupational health and safety/environmental site risk management processes	None
DRTOG54B	Manage multiple drilling operations	None
DRTOG55A	Support blow out prevention operations	None
DRTOG56A	Assist withy coal seam gas control	None
DRTOG57A	Apply effective coal seam gas control practices	None
DRTOG58A	Apply blow out prevention operational procedures	None
DRTOGOF05B	Carry out deck operations	None
DRTOGOF06B	Handle and store cargo	None

Code	Title	Prerequisite
DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations	None
DRTOGOF09B	Contribute to the control of offshore emergencies	None
DRTOGOF20B	Monitor, operate and maintain mud pits and equipment	None
DRTOGOF21B	Operate drilling fluids and mud pits	None
DRTOGON06B	Carry out rig lease operations	None
DRTOGON07B	Move loads	None
DRTOGON15B	Manage subordinates and equipment	None
DRTOGON17B	Prepare and operate drilling fluid systems	None
DRTOGON18B	Maintain services and operations to meet quality standards	None
DRTOGON23B	Operate mud pumps	None
DRTOGON24B	Operate mud systems	None

Imported units of competency in this Training Package

Code	Title	Origin
BCCCM2004B	Drain and dewater site	BCC03
BCCCM2013B	Control traffic with a stop-slow bat	TBA
BCCRC2008B	Lay pipes	BCC03
BCCTT3001B	Conduct fluid assisted directional boring	BCC03
BCCTT3002B	Conduct impact moling, ramming and augering	BCC03
BSBFLM501A	Manage personal work priorities and professional development	TBA
BSBFLM502A	Provide leadership in the workplace	TBA
BSBFLM503A	Establish effective workplace relationships	TBA
BSBFLM504A	Facilitate work teams	TBA
BSBMGT503A	Prepare budgets and financial plans	BSB01
BSBMGT504A	Manage budgets and financial plans	BSB01
BSBMGT505A	Ensure a safe workplace	BSB01
BSBMGT506A	Recruit, select and induct staff	BSB01
BSBMGT603A	Review and develop business plans	BSB01
BSBMGT604A	Manage business operations	BSB01
BSBRKG304A	Maintain business records	BSB01
BSBRKG403A	Set up a business or records system for a small office	BSB01
BSBSBM402A	Undertake financial planning	BSB01
BSBSBM403A	Promote the business	BSB01
BSBSBM404A	Undertake business planning	BSB01
BSBSBM405A	Monitor and manage business operations	BSB01
BSBSBM406A	Manage finances	BSB01
BSBSBM407A	Manage a small team	BSB01
MNCG1038A	Perform basic cutting and welding	MNC04
MNCO1040A	Conduct shotfiring operations	MNC04
MNCO1041A	Support shotfiring operations	MNC04

Code	Title	Origin
MNCU1048A	Conduct shotfiring	MNC04
MNCU1049A	Support shotfiring operations	MNC04
MNMMNI401A	Administer shotfiring activities	MNM99
MNMOCC103A	Prepare for blasting	MNM99
MNMOCC104A	Conduct blasting operations	MNM99
MNMOCC1418A	Transport plant, equipment and personnel	MNM99
MNMOCC426A	Operate light vehicle	MNM99
MNMOCC428A	Operate mine services vehicle	MNM99
MNMPRD116A	Take samples	MNM99
MNMUGC102A	Conduct ground support operations	TBA
MNMUGC108A	Maintain magazine	MNM99
MNMUGC1101A	Set up and prepare for ground support	MNM99
MNMUGC118A	Charge underground blasts	MNM99
MNMUGC432A	Operate equipment services vehicle underground	MNM99
MNMUGC434A	Transport plant, equipment and personnel	MNM99
MNMUGC439A	Conduct mechanical scaling	MNM99
MNMUGC441A	Handle and transport explosives	TBA
MNQOPS311A	Conduct blast survey	MNQ03
MNQOPS413A	Conduct shotfiring	MNQ03
TAAASS401A	Plan and organise assessment	TBA
TAAASS402A	Assess competence	TBA
TAAASS404A	Participate in assessment validation	TBA
TAADEL301A	Provide training through instruction and demonstration of work skills	TBA
TAADEL404A	Facilitate work-based learning	TBA

List of units in DRT03 and mapping with DRT98

Mapping of DRT98 to DRT03

The following mapping, in DRT98 code order, shows the revised unit which replaces the existing unit. The next section maps DRT03 to DRT98 listing all units in DRT03.

DRT98		DRT03		
Unit code	Unit title	Unit code	Unit title	Comment
BSZ401A	Plan assessment	BSZ401A	Plan assessment	Equivalent
BSZ402A	Conduct assessment	BSZ402A	Conduct assessment	Equivalent
BSZ403A	Review assessment	BSZ403A	Review assessment	Equivalent
DRTNH01A	Apply occupational health and safety in the work environment	DRTNHB01A	Follow workplace health, safety and environment procedures	Replacement unit. Entry level units have been significantly revised
DRTNH02A	Living away and interpersonal skills			This unit has been absorbed into other units
DRTNH03A	Mobilise equipment and materials	DRTNHB05A	Mobilise equipment and materials	Equivalent
DRTNH04A	Set up/pack up drill site	DRTNHB06A	Set up/pack up drill site	Equivalent
DRTNH05A	Support drilling process	DRTNHB07A	Support drilling process	Equivalent
DRTNH06A	Undertake samples collection and recording			This unit has been absorbed into other units
DRTNH07A	Conduct drilling operations			This unit has been replaced by the suite of method units

DRTNH08A	Manage on-site operations	DRTNHB21A	Run on-site operations	Similar. This unit has been adjusted to better fit the Certificate II. Parts of it now appear as DRTNHB43A
DRTNH09A	Select, test and condition drilling fluids			This unit has been absorbed into other units
DRTNH10A	Construct monitoring bores	DRTNHB24A	Construct monitoring bores	Equivalent
DRTNH11A	Construct production bores			This unit has been replaced by a series of water well units which align with the national licencing system
DRTNH12A	Carry out operational maintenance	DRTNHB22A	Carry out operational maintenance	Equivalent
DRTNH13A	Conduct down hole tests			This unit has been absorbed into other relevant units
DRTNH14A	Carry out on the job training and assessing	DRTNHB23A	Carry out informal on the job training	Equivalent
DRTNH15A	Manage non-routine, complex technical situations	DRTNHB41A	Manage non-routine, complex technical situations	Equivalent
DRTNH16A	Maintain effective team/crew operations	DRTNHB46A	Maintain effective team/crew operations	Equivalent
DRTNH17A	Manage equipment maintenance	DRTNHB47A	Manage equipment maintenance	Equivalent
DRTNH18A	Manage financial resources	DRTNHB48A	Manage financial	Equivalent

			resources	
DRTNH19A	Plan drilling	DRTNHB49A	Plan drilling	Equivalent
DRTNH20A	Manage business operations	DRTNHB50A	Manage business operations	Equivalent
DRTNH21A	Manage human resources	DRTNHB51A	Manage human resources	Equivalent
DRTNH22A	Manage client services	DRTNHB52A	Manage client services	Equivalent
DRTNH23A	Manage non-routine, complex situations	DRTNHB53A	Manage non-routine, complex situations	Equivalent
DRTOG25A	Maintain standard procedures and safe working practices	DRTOG25B	Maintain standard procedures and safe working practices	Equivalent
DRTOG26A	Rig up	DRTOG26B	Rig up	Equivalent
DRTOG27A	Conduct pre-spud operations	DRTOG27B	Conduct pre-spud operations	Equivalent
DRTOG28A	Conduct drilling operations	DRTOG28B	Conduct drilling operations	Equivalent
DRTOG29A	Perform drilling calculations and reporting	DRTOG29B	Perform drilling calculations and reporting	Equivalent
DRTOG30A	Carry out well control and blowout prevention	DRTOG30B	Carry out well control and blowout prevention	Equivalent
DRTOG31A	Shut down rig	DRTOG31B	Shut down rig	Equivalent
DRTOG32A	Participate in nipping-up and pressure test	DRTOG32B	Participate in nipping-up and pressure test	Equivalent
DRTOG33A	Maintain drilling rig communications systems	DRTOG33B	Maintain drilling rig communications systems	Equivalent

DRTOG34A	Manage equipment maintenance	DRTOG34B	Manage equipment maintenance	Equivalent
DRTOG35A	Maintain man management systems	DRTOG35B	Maintain man management systems	Equivalent
DRTOG36A	Coordinate air drilling operations	DRTOG36B	Coordinate air drilling operations	Equivalent
DRTOG37A	Participate in, lead and facilitate work teams	DRTOG37B	Participate in, lead and facilitate work teams	Equivalent
DRTOG38A	Manage rig operations	DRTOG38B	Manage rig operations	Equivalent
DRTOG39A	Plan and evaluate rig operations	DRTOG39B	Plan and evaluate rig operations	Equivalent
DRTOG40A	Oversee drilling operations	DRTOG40B	Oversee drilling operations	Equivalent
DRTOG41A	Manage drilling operations	DRTOG41B	Manage drilling operations	Equivalent
DRTOG42A	Manage drilling induction and orientation	DRTOG42B	Manage drilling induction and orientation	Equivalent
DRTOG43A	Organise rig move and camp move	DRTOG43B	Manage rig move and camp move	Equivalent
DRTOG44A	Manage and monitor rig-up and rig-up to spud operations	DRTOG44B	Manage and monitor rig-up and rig-up to spud operations	Equivalent
DRTOG45A	Manage well completion and abandonment	DRTOG45B	Manage well completion and abandonment	Equivalent
DRTOG52A	Implement and maintain statutory/legal compliance system	DRTOG52B	Implement and maintain statutory/legal compliance system	Equivalent

DRTOG53A	Implement and maintain OHS&E site risk management processes	DRTOG53B	Implement and maintain occupational health and safety/ environmental site risk management processes	Equivalent
DRTOG54A	Manage multiple drilling operations	DRTOG54B	Manage multiple drilling operations	Equivalent
DRTOGOF01A	Assist with the health and safety of the working environment	DRTOG01B	Assist with the health and safety of the working environment	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF02A	Assist in maintaining rig safety and emergency procedures	DRTOG02B	Assist in maintaining rig safety and emergency procedures	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF03A	Assist with establishing and maintaining effective working relationships	DRTOG03B	Assist in establishing and maintaining effective working relationships	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF04A	Maintain equipment and hull	DRTOG04B	Carry out equipment and basic rig maintenance	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF05A	Carry out deck operations	DRTOGOF05B	Carry out deck operations	Equivalent
DRTOGOF06A	Handle and store cargo	DRTOGOF06B	Handle & store cargo	Equivalent
DRTOGOF07A	Assist in the transfer of passengers and freight during helicopter operations	DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations	Equivalent
DRTOGOF08A	Contribute to the health and safety of the working environment	DRTOG08B	Assist in the transfer of passengers and freight during helicopter operations	Equivalent

DRTOGOF09A	Contribute to the control of emergencies and critical situations	DRTOG09B	Contribute to the control of emergencies and critical situations	Equivalent. Has been merged with the relevant OGON unit. The off shore specific competencies has been maintained in DRTOGOF09B
		DRTOGOF09B	Contribute to the control of offshore emergencies	
DRTOGOF10A	Establish and maintain effective working relationships	DRTOG10B	Establish and maintain effective working relationships	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF11A	Prepare and operate drilling fluid systems	DRTOG11B	Prepare and operate drilling fluid systems	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF12A	Perform drill floor operations	DRTOG12B	Perform rig floor operations	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF13A	Apply occupational health and safety in the workplace	DRTOG13B	Apply occupational health and safety in the workplace	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF14A	Control emergencies and critical situations	DRTOG14B	Control emergencies and critical situations	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF15A	Create, maintain and enhance productive working relationships	DRTOG15B	Create, maintain and enhance productive working relationships	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF16A	Operate and maintain derrick	DRTOG20B	Conduct and maintain derrick operations	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF17A	Operate ancillary equipment	DRTOG19B	Operate and maintain ancillary equipment	Equivalent. Has been merged with the relevant OGON unit

DRTOGOF18A	Run casing	DRTOG21B	Trip casing	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF19A	Trip tubular	DRTOG22B	Trip pipe	Equivalent. Has been merged with the relevant OGON unit
DRTOGOF20A	Monitor, operate and maintain mud pits and equipment	DRTOGOF20B	Monitor, operate and maintain mud pits and equipment	Equivalent
DRTOGOF21A	Operate drilling fluids and mud pits	DRTOGOF21B	Operate drilling fluids and mud pits	Equivalent
DRTOGON01A	Assist with the health and safety of the working environment	DRTOG01B	Assist with the health and safety of the working environment	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON02A	Assist with the control of emergencies and critical situations			Merged into DRTOG02B
DRTOGON03A	Assist in maintaining rig safety and emergency procedures	DRTOG02B	Assist in maintaining rig safety and emergency procedures	Merged into DRTOG02B
DRTOGON04A	Assist in establishing and maintaining effective working relationships	DRTOG03B	Assist in establishing and maintaining effective working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON05A	Carry out equipment and basic rig maintenance	DRTOG04B	Carry out equipment and basic rig maintenance	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON06A	Carry out rig lease operations	DRTOGON06B	Carry out rig lease operations	Equivalent
DRTOGON07A	Move loads	DRTOGON07B	Move loads	Equivalent

DRTOGON08A	Contribute to the health and safety of the working environment	DRTOG08B	Contribute to the health and safety of the working environment	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON09A	Contribute to the control of emergencies and critical situations	DRTOG09B	Contribute to the control of emergencies and critical situations	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON10A	Establish and maintain effective working relationships	DRTOG10B	Establish and maintain effective working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON11A	Prepare and operate drilling fluid systems	DRTOG11B	Prepare and operate drilling fluid systems	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON12A	Perform rig floor operations	DRTOG12B	Perform rig floor operations	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON13A	Apply Occupational Health and Safety in the workplace	DRTOG13B	Apply occupational health and safety in the workplace	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON14A	Control emergencies and critical situations	DRTOG14B	Control emergencies and critical situations	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON15A	Manage subordinates and equipment	DRTOGON15B	Manage subordinates and equipment	Equivalent
DRTOGON16A	Create, maintain and enhance productive working relationships	DRTOG15B	Create, maintain and enhance productive working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON17A	Prepare and operate drilling fluid systems	DRTOGON17B	Prepare and operate drilling fluid systems	Equivalent
DRTOGON18A	Maintain services and	DRTOGON18B	Maintain services and	Equivalent

	operations to meet quality standards		operations to meet quality standards	
DRTOGON19A	Operate and maintain ancillary equipment	DRTOG19B	Operate and maintain ancillary equipment	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON20A	Conduct and maintain derrick operations	DRTOG20B	Conduct and maintain derrick operations	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON21A	Trip casing	DRTOG21B	Trip casing	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON22A	Trip pipe	DRTOG22B	Trip pipe	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON23A	Operate mud pumps	DRTOGON23B	Operate mud pumps	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON24A	Operate mud systems	DRTOGON24B	Operate mud systems	Equivalent. Has been merged with the relevant OGOF unit

Mapping of DRT03 to DRT98

The following table lists all units in DRT03, in code order and maps them to DRT98 units.

DRT03		DRT98		
Unit code	Unit title	Unit code	Unit title	Comment
BCCCM2004B	Drain and dewater site			New to DRT03
BCCCM2013B	Control traffic with a stop-slow bat			New to DRT03
BCCRC2008B	Lay pipes			New to DRT03

BCCTT3001B	Conduct fluid assisted directional boring			New to DRT03
BCCTT3002B	Conduct impact moling, ramming and augering			New to DRT03
BCCTT3003B	Conduct microtunnelling and pipe jacking			New to DRT03
BSBFLM501A	Manage personal work priorities and professional development			New to DRT03
BSBFLM502A	Provide leadership in the workplace			New to DRT03
BSBFLM503A	Establish effective workplace relationships			New to DRT03
BSBFLM504A	Facilitate work teams			New to DRT03
BSBMGT503A	Prepare budgets and financial plans			New to DRT03
BSBMGT504A	Manage budgets and financial plans			New to DRT03
BSBMGT505A	Ensure a safe workplace			New to DRT03
BSBMGT506A	Recruit, select and induct staff			New to DRT03
BSBMGT603A	Review and develop business plans			New to DRT03
BSBMGT604A	Manage business operations			New to DRT03
BSBRKG304A	Maintain business records			New to DRT03

BSBRKG403A	Set up a business or records system for a small office			New to DRT03
BSBSBM402A	Undertake financial planning			New to DRT03
BSBSBM403A	Promote the business			New to DRT03
BSBSBM404A	Undertake business planning			New to DRT03
BSBSBM405A	Monitor and manage business operations			New to DRT03
BSBSBM406A	Manage finances			New to DRT03
BSBSBM407A	Manage a small team			New to DRT03
BSZ401A	Plan assessment	BSZ401A	Plan assessment	Equivalent
BSZ402A	Conduct assessment	BSZ402A	Conduct assessment	Equivalent
BSZ403A	Review assessment	BSZ403A	Review assessment	Equivalent
BSZ404A	Train small groups			New to DRT03
BSZ405A	Plan and promote a training program			New to DRT03
BSZ406A	Plan a series of training sessions			New to DRT03
BSZ407A	Deliver training sessions			New to DRT03
BSZ408A	Review training			New to DRT03
DRTNHB01A	Follow workplace health, safety and environment procedures	DRTNH01A	Apply occupational health and safety in the work environment	Replacement unit. Entry level units have been significantly revised

DRTNHB02A	Follow underground health and safety procedures			New to DRT03
DRTNHB03A	Work effectively in the drilling industry			New to DRT03
DRTNHB04A	Work in a drilling team			New to DRT03
DRTNHB05A	Mobilise equipment and materials	DRTNH03A	Mobilise equipment and materials	Equivalent
DRTNHB06A	Set up/pack up drill site	DRTNH04A	Set up/pack up drill site	Equivalent
DRTNHB07A	Support drilling process	DRTNHB05A	Support drilling process	Equivalent
DRTNHB08A	Assist air drilling			New to DRT03
DRTNHB09A	Assist continuous flight auger drilling			New to DRT03
DRTNHB10A	Assist large diameter auger drilling			New to DRT03
DRTNHB11A	Assist conventional core drilling			New to DRT03
DRTNHB12A	Assist wireline core drilling			New to DRT03
DRTNHB13A	Assist guided boring			New to DRT03
DRTNHB14A	Assist directional drilling			New to DRT03
DRTNHB15A	Assist mud rotary drilling			New to DRT03
DRTNHB16A	Assist raiseboring			New to DRT03
DRTNHB17A	Assist cable tool drilling			New to DRT03

DRTNHB18A	Assist down hole hammer drilling			New to DRT03
DRTNHB19A	Assist top hole hammer drilling			New to DRT03
DRTNHB20A	Set up and prepare for drilling operations			New to DRT03
DRTNHB21A	Run on-site operations	DRTNH08A	Manage on-site operations	Similar. This unit has been adjusted to better fit the Certificate II. Parts of it now appear as DRTNHB43A
DRTNHB22A	Carry out operational maintenance	DRTNH12A	Carry out operational maintenance	Equivalent
DRTNHB23A	Carry out informal on the job training	DRTNH14A	Carry out on the job training and assessing	Equivalent
DRTNHB24A	Construct monitoring bores	DRTNH10A	Construct monitoring bores	Equivalent
DRTNHB25A	Construct single aquifer production bores			New to DRT03
DRTNHB26A	Construct multiple aquifer production bores			New to DRT03
DRTNHB27A	Conduct air drilling			New to DRT03
DRTNHB28A	Conduct continuous flight auger drilling			New to DRT03
DRTNHB29A	Conduct large diameter auger drilling			New to DRT03

DRTNHB30A	Conduct conventional core drilling			New to DRT03
DRTNHB31A	Conduct wireline core drilling			New to DRT03
DRTNHB32A	Conduct guided boring			New to DRT03
DRTNHB33A	Conduct directional drilling			New to DRT03
DRTNHB34A	Conduct reaming			New to DRT03
DRTNHB35A	Install product pipe			New to DRT03
DRTNHB36A	Conduct mud rotary drilling			New to DRT03
DRTNHB37A	Conduct raiseboring			New to DRT03
DRTNHB38A	Conduct cable tool drilling			New to DRT03
DRTNHB39A	Conduct down hole hammer drilling			New to DRT03
DRTNHB40A	Conduct top hole hammer drilling			New to DRT03
DRTNHB41A	Manage non-routine, complex technical situations	DRTNH15A	Manage non-routine, complex technical situations	Equivalent
DRTNHB42A	Manage mobilisation of equipment and materials			New to DRT03
DRTNHB43A	Manage on-site operations			New to DRT03
DRTNHB44A	Construct artesian (flowing) aquifer production bores			New to DRT03

DRTNHB45A	Construct geothermal wells			New to DRT03
DRTNHB46A	Maintain effective team/crew operations	DRTNH16A	Maintain effective team/crew operations	Equivalent
DRTNHB47A	Manage equipment maintenance	DRTNH17A	Manage equipment maintenance	Equivalent
DRTNHB48A	Manage financial resources	DRTNH18A	Manage financial resources	Equivalent
DRTNHB49A	Plan drilling	DRTNH19A	Plan drilling	Equivalent
DRTNHB50A	Manage business operations	DRTNH20A	Manage business operations	Equivalent
DRTNHB51A	Manage human resources	DRTNH21A	Manage human resources	Equivalent
DRTNHB52A	Manage client services	DRTNH22A	Manage client services	Equivalent
DRTNHB53A	Manage non-routine, complex situations	DRTNH23A	Manage non-routine, complex situations	Equivalent
DRTOG01B	Assist with the health and safety of the working environment	DRTOGOF01A	Assist with the health and safety of the working environment	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON01A	Assist with the health and safety of the working environment	Equivalent. Has been merged with the relevant OGOF unit
DRTOG02B	Assist in maintaining rig safety and emergency procedures	DRTOGOF02A	Assist in maintaining rig safety and emergency procedures	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON03A	Assist in maintaining rig safety and emergency	Merged into DRTOG02B

			procedures	
		DRTOGON02A	Assist with the control of emergencies and critical situations	Merged into DRTOG02B
DRTOG03B	Assist in establishing and maintaining effective working relationships	DRTOGOF03A	Assist with establishing and maintaining effective working relationships	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON04A	Assist in establishing and maintaining effective working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOG04B	Carry out equipment and basic rig maintenance	DRTOGOF04A	Maintain equipment and hull	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON05A	Carry out equipment and basic rig maintenance	Equivalent. Has been merged with the relevant OGOF unit
DRTOG08B	Contribute to the health and safety of the working environment	DRTOGOF08A	Contribute to the health and safety of the working environment	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON08A	Contribute to the health and safety of the working environment	Equivalent. Has been merged with the relevant OGOF unit
DRTOG09B	Contribute to the control of emergencies and critical situations	DRTOGOF09A	Contribute to the control of emergencies and critical situations	Equivalent. Has been merged with the relevant OGON unit. The off shore specific competencies has been maintained in DRTOGOF09B
		DRTOGON09A	Contribute to the control of emergencies and	Equivalent. Has been merged with the relevant OGOF unit

			critical situations	
DRTOG10B	Establish and maintain effective working relationships	DRTOGOF10A	Establish and maintain effective working relationships	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON10A	Establish and maintain effective working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOG11B	Prepare and operate drilling fluid systems	DRTOGOF11A	Prepare and operate drilling fluid systems	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON11A	Prepare and operate drilling fluid systems	Equivalent. Has been merged with the relevant OGOF unit
DRTOG12B	Perform rig floor operations	DRTOGOF12A	Perform drill floor operations	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON12A	Perform rig floor operations	Equivalent. Has been merged with the relevant OGOF unit
DRTOG13B	Apply occupational health and safety in the workplace	DRTOGOF13A	Apply Occupational Health and Safety in the workplace	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON13A	Apply Occupational Health and Safety in the workplace	Equivalent. Has been merged with the relevant OGOF unit
DRTOG14B	Control emergencies and critical situations	DRTOGOF14A	Control emergencies and critical situations	Equivalent. Has been merged with the relevant OGON unit

		DRTOGON14A	Control emergencies and critical situations	Equivalent. Has been merged with the relevant OGOF unit
DRTOG15B	Create, maintain and enhance productive working relationships	DRTOGOF15A	Create, maintain and enhance productive working relationships	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON16A	Create, maintain and enhance productive working relationships	Equivalent. Has been merged with the relevant OGOF unit
DRTOG19B	Operate and maintain ancillary equipment	DRTOGOF17A	Operate ancillary equipment	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON19A	Operate and maintain ancillary equipment	Equivalent. Has been merged with the relevant OGOF unit
DRTOG20B	Conduct and maintain derrick operations	DRTOGOF16A	Operate and maintain derrick	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON20A	Conduct and maintain derrick operations	Equivalent. Has been merged with the relevant OGOF unit

DRTOG21B	Trip casing	DRTOGOF18A	Run casing	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON21A	Trip casing	Equivalent. Has been merged with the relevant OGOF unit
DRTOG22B	Trip pipe	DRTOGOF19A	Trip tubular	Equivalent. Has been merged with the relevant OGON unit
		DRTOGON22A	Trip pipe	Equivalent. Has been merged with the relevant OGOF unit
DRTOG25B	Maintain standard procedures and safe working practices	DRTOG25A	Maintain standard procedures and safe working practices	Equivalent
DRTOG26B	Rig up	DRTOG26A	Rig up	Equivalent
DRTOG27B	Conduct pre-spud operations	DRTOG27A	Conduct pre-spud operations	Equivalent
DRTOG28B	Conduct drilling operations	DRTOG28A	Conduct drilling operations	Equivalent
DRTOG29B	Perform drilling calculations and reporting	DRTOG29A	Perform drilling calculations and reporting	Equivalent
DRTOG30B	Carry out well control and blowout prevention	DRTOG30A	Carry out well control and blowout prevention	Equivalent

DRTOG31B	Shut down rig	DRTOG31A	Shut down rig	Equivalent
DRTOG32B	Participate in nipping-up and pressure test	DRTOG32A	Participate in nipping-up and pressure test	Equivalent
DRTOG33B	Maintain drilling rig communications systems	DRTOG33A	Maintain drilling rig communications systems	Equivalent
DRTOG34B	Manage equipment maintenance	DRTOG34A	Manage equipment maintenance	Equivalent
DRTOG35B	Maintain man management systems	DRTOG35A	Maintain man management systems	Equivalent
DRTOG36B	Coordinate air drilling operations	DRTOG36A	Coordinate air drilling operations	Equivalent
DRTOG37B	Participate in, lead and facilitate work teams	DRTOG37A	Participate in, lead and facilitate work teams	Equivalent
DRTOG38B	Manage rig operations	DRTOG38A	Manage rig operations	Equivalent
DRTOG39B	Plan and evaluate rig operations	DRTOG39A	Plan and evaluate rig operations	Equivalent
DRTOG40B	Oversee drilling operations	DRTOG40A	Oversee drilling operations	Equivalent
DRTOG41B	Manage drilling operations	DRTOG41A	Manage drilling operations	Equivalent
DRTOG42B	Manage drilling induction and orientation	DRTOG42A	Manage drilling induction and orientation	Equivalent
DRTOG43B	Manage rig move and camp move	DRTOG43A	Organise rig move and camp move	Equivalent
DRTOG44B	Manage and monitor rig-up and rig-up to spud operations	DRTOG44A	Manage and monitor rig-up and rig-up to spud	Equivalent

			operations	
DRTOG45B	Manage well completion and abandonment	DRTOG45A	Manage well completion and abandonment	Equivalent
DRTOG52B	Implement and maintain statutory/legal compliance system	DRTOG52A	Implement and maintain statutory/legal compliance system	Equivalent
DRTOG53B	Implement and maintain occupational health and safety/environmental site risk management processes	DRTOG53A	Implement and maintain OHS&E site risk management processes	Equivalent
DRTOG54B	Manage multiple drilling operations	DRTOG54A	Manage multiple drilling operations	Equivalent
DRTOGOF05B	Carry out deck operations	DRTOGOF05A	Carry out deck operations	Equivalent
DRTOGOF06B	Handle and store cargo	DRTOGOF06A	Handle and store cargo	Equivalent
DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations	DRTOGOF07A	Assist in the transfer of passengers and freight during helicopter operations	Equivalent
DRTOGOF09B	Contribute to the control of offshore emergencies			New to DRT03
DRTOGOF20B	Monitor, operate and maintain mud pits and equipment	DRTOGOF20A	Monitor, operate and maintain mud pits and equipment	Equivalent
DRTOGOF21B	Operate drilling fluids and mud pits	DRTOGOF21A	Operate drilling fluids and mud pits	Equivalent

DRTOGON06B	Carry out rig lease operations	DRTOGON06A	Carry out rig lease operations	Equivalent
DRTOGON07B	Move loads	DRTOGON07A	Move loads	Equivalent
DRTOGON15B	Manage subordinates and equipment	DRTOGON15A	Manage subordinates and equipment	Equivalent
DRTOGON17B	Prepare and operate drilling fluid systems	DRTOGON17A	Prepare and operate drilling fluid systems	Equivalent
DRTOGON18B	Maintain services and operations to meet quality standards	DRTOGON18A	Maintain services and operations to meet quality standards	Equivalent
DRTOGON23B	Operate mud pumps	DRTOGON23A	Operate mud pumps	Equivalent. Has been merged with the relevant OGOF unit
DRTOGON24B	Operate mud systems	DRTOGON24A	Operate mud systems	Equivalent. Has been merged with the relevant OGOF unit
MNCG1038A	Perform basic cutting and welding			New to DRT03
MNCO1040A	Conduct shotfiring operations			New to DRT03
MNCO1041A	Support shotfiring operations			New to DRT03
MNCU1048A	Conduct shotfiring			New to DRT03
MNCU1049A	Support shotfiring operations			New to DRT03
MNMOCC103A	Prepare for blasting			New to DRT03

MNMOCC104A	Conduct blasting operations			New to DRT03
MNMUGC1101A	Set up and prepare for ground support			New to DRT03
MNMUGC108A	Maintain magazine			New to DRT03
MNMUGC118A	Charge underground blasts			New to DRT03
MNMMN1401A	Administer shotfiring activities			New to DRT03
MNQOPS311A	Conduct blast surveys			New to DRT03
MNQOPS413A	Conduct shotfiring			New to DRT03

Explanation of the review date

The review date (shown on the title page and in the header of each page) indicates when the Training Package is expected to be reviewed in the light of changes such as changing technologies and circumstances. The review date is not an expiry date. Endorsed Training Packages and their components remain current until they are reviewed or replaced.

Overview

What is a Training Package?

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:

- provides a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

How do Training Packages fit within the National Training Framework?

The National Training Framework is made up of the nationally agreed quality arrangements for the vocational education and training sector, the Australian Quality Training Framework (AQTF), and Training Packages endorsed by the National Quality Council (NQC).

How are Training Packages developed?

Training Packages are developed by Industry Skills Councils or enterprises to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of Training Packages, developers must provide evidence of extensive research, consultation and support within the industry area or enterprise.

How do Training Packages encourage flexibility?

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained.

Training Packages acknowledge that people can achieve vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the units of competency, and even gain a qualification, without completing a formal training program.

With Training Packages, assessment and training may be conducted at the workplace, off-the-job, at a training organisation, during regular work, or through work experience, work placement, work simulation or any combination of these.

Who can deliver and assess using Training Packages?

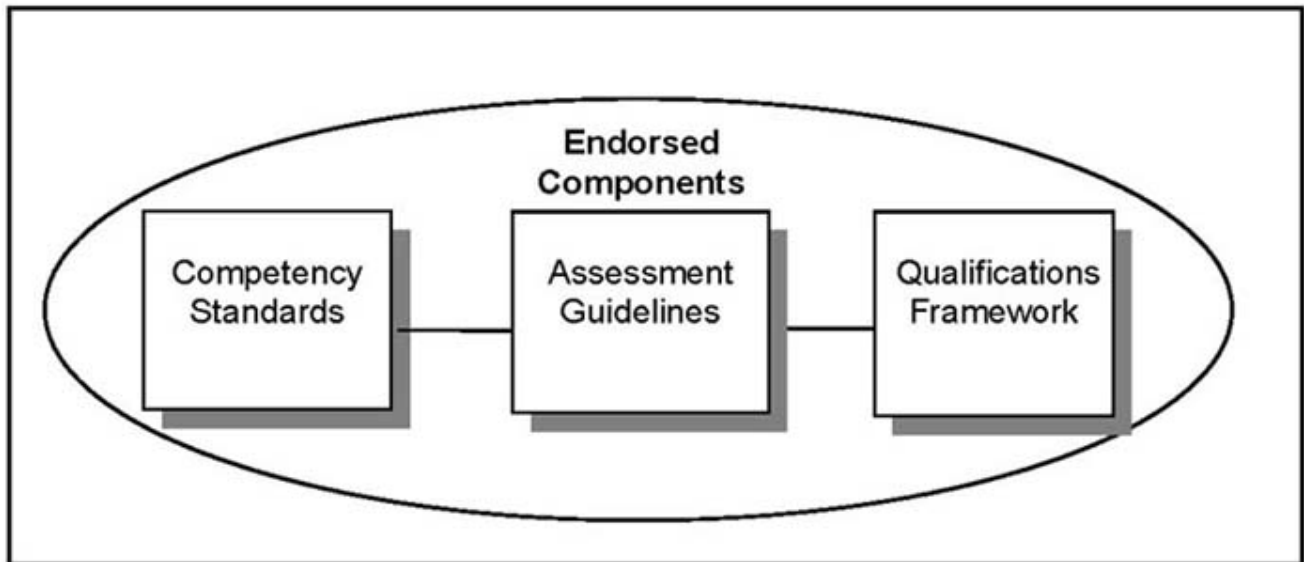
Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific units of competency on its scope of registration, or that works in partnership with another RTO as specified in the AQTF *Standards for Registered Training Organisations*.

Training Package Components

Training Packages are made up of mandatory components endorsed by the NQC, and optional support materials.

Training Package Endorsed Components

The nationally endorsed components include the Competency Standards, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.



Competency Standards

Each unit of competency identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competency must be adhered to in training and assessment to ensure consistency of outcomes.

Assessment Guidelines

The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the *Standards for Registered Training Organisations*. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognised qualifications.

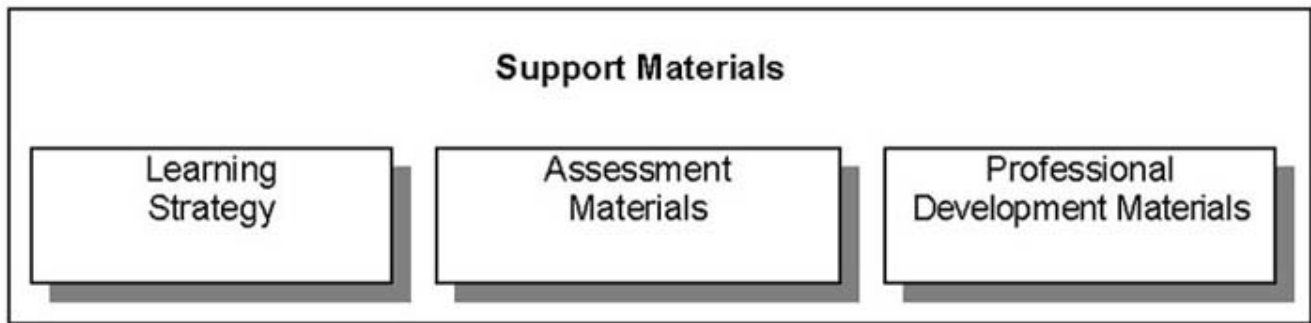
Qualifications Framework

Each Training Package provides details of those units of competency that must be achieved to award AQF qualifications. The rules around which units of competency can be combined to make up a valid AQF qualification in the Training Package are referred to as the "packaging rules". The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

Training Package Support Materials

The endorsed components of Training Packages are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry and learners.

Training Package support materials can relate to single or multiple units of competency, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories illustrated below.



Training Package support materials are produced by a range of stakeholders such as RTOs, individual trainers and assessors, private and commercial developers and Government agencies.

Where such materials have been quality assured through a process of 'noting' by the NQC, they display the following official logo. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and its availability (www.ntis.gov.au).



It is not compulsory to submit support materials for noting; any resources that meet the requirements of the Training Package can be used.

Training Package, Qualification and Unit of Competency Codes

There are agreed conventions for the national codes used for Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, and with the title always following the code.

Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example DRT03. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example DRT20103. The first three letters identify the Training Package; the first number identifies the qualification level (noting that arabic numbers are not used in qualification titles themselves); the next two numbers identify the position in the sequence of the qualification at that level; and the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed).

Unit of Competency Codes

Within each Training Package, each unit of competency has a unique code. The unit of

competency codes are assigned when the Training Package is endorsed, or when new units of competency are added to an existing endorsed Training Package.

A typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in DRTNHB01A. The first three characters signify the Training Package (DRT03Drilling Training Package in the above example) and up to eight characters, relating to an industry sector, function or skill area, follow. The last character is always a letter and identifies the unit of competency version. The A in the example above indicates that this is the original unit of competency. An incremented version identifier usually means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent. Where changes are made that alter the outcome, a new code is assigned and the title is changed.

Training Package, Qualification and Unit of Competency Titles

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package, and with the code always placed before the title.

Training Package Titles

The title of each endorsed Training Package is unique and relates the Training Packages broad industry coverage.

Qualification Titles

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- firstly, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma or Advanced Diploma
- this is followed by the words "in" for Certificates I to IV and "of" for Diploma and Advanced Diploma
- then the industry descriptor follows, for example Telecommunications, and
- if applicable, the occupational or functional stream follows in brackets, for example (Computer Systems).

For example:

- DRT20103 Certificate II in Drilling - Environmental
- DRT20203 Certificate II in Drilling - Foundation/Construction

Unit of Competency Titles

Each unit of competency title is unique. Unit of competency titles describe the competency outcome concisely, and are written in sentence case.

For example:

- DRTNHB01A Follow workplace health, safety and environment procedures
- DRTNHB02A Follow underground health and safety procedures

Development of the Drilling Training Package (DRT03)

DRT98

The Drilling Training Package (DRT98) was originally endorsed in December 1998. It was reviewed as part of the usual process of maintaining the accuracy and relevance of Training Packages for Australian industry.

The review process

The Phase 1 Review involved informing and consulting a wide range of people and organisations that have an interest or involvement in the drilling industry. All known stakeholder groups were consulted during the period December 2000 to June 2001. Information and feedback provided in the period between endorsement of the Training Package in December 1998, and the commencement of the Phase 1 Review in December 2000, was included in the Review.

Over 1500 organisations or individual people were contacted. Information was provided by micro-, small, medium and large drilling contractors, individuals working in the industry, industry assessors and people with responsibility for training, all relevant industry associations, regulatory authorities, some suppliers to the industry, State/Territory and national Training Authorities and Registered Training Organisations (RTOs). Key personnel in relevant industries to which drilling companies contract were also consulted. Consultation included Australian and New Zealand based companies, many of which have international operations, and other relevant international bodies. Findings and recommendations were validated by an industry consultation process.

The primary finding was that major change is recommended to the Qualifications Framework for the industry. This framework will be a structure of core standards, common standards and sector specific standards, but will additionally have a structure of electives and endorsements, reflecting drilling method, licensing requirements or specific niche skills areas. Competency standards relating to these endorsements need to be developed. Qualifications will still retain flexibility, to meet the industry's need for personnel to be able to move from sector to sector, but will enable a clearer statement of the skill areas of an individual.

The Phase 2 Review continued consultation with the same groups of people and also included New Zealand. The inclusion of New Zealand was important both because many drilling companies have trans-Tasman operations, and also the experience of geothermal drilling is greater in New Zealand (although still relevant in Australia).

National consultations were held using focus groups and individual interviews. Technical experts were used for writing/reviewing units of competency in specific areas. The draft new units and revised existing units were validated through a similar mechanism. A list of all those who participated is included in this section.

While great breadth of consultation was pursued in the earlier stages of the project, as areas became agreed, consultation focused more on those areas impacted by the changes still being made.

The industry steering committee was large to ensure it contained a wide spread of both industry and RTO representation, as well as State Training Authorities (STAs). It contributed to the design of the reviewed Training Package as well as providing critical feedback on all components both individually and by dissemination of information through each one's constituency.

Awards, licensing and other regulatory issues

Various awards apply within this industry, and some employees are non-award. This Training Package was designed to allow for these different arrangements. It is appropriate to use this Training Package as part of an award/agreement, but it has not been designed to fit any particular award.

There are no general licensing issues, however specific licenses may be required in some jobs. The local regulations should be checked for details. The industry is generally subject to a range of regulatory control such as environmental controls. These vary with the nature of

the drilling operation and to some extent on its location as most regulations are state based and many are enforced by local government. In addition, most drillers work under contract for other organisations and these organisations also impose requirements. The mining industry for example is a large user of drilling services and has some of the most stringent requirements. This Training Package allows for these differences without mandating them to specific units of competency which would not be appropriate.

The steering committee

The steering committee contributed much time and expertise to this project and their contribution is gratefully acknowledged. The steering committee members were:

Jo Behlau	ANTA
Kevin Brown	Kiwi Well Drillers
Warren Burns	Geodrill Assessment and Training Services
Bob Couran	Australian Drilling Industry Training Committee Ltd
Leigh Davies	Davies International
Max Forster	MDAA
Wayne Herraman	Boart Longyear
David Hunter	Raise Bore
Max King	Drilling Safety Services
David Lock	SA Department of Water Resources Drilling Services
Stephen Longeran	AJ Lucas
Derek Morrow	Atwood Oceanics
Wayne Muller	WA Department of Training
Jeff Pace	ASTT
Mike Quade	ANTA - replacing Jo Behlau
Kevin Rollins	OD&E
Len Sargeant	Drill-Mor Services
June Sweet	Brandrill
Graham Wakeling	ADIA
Brenton Wallace	MDAA
Alan Wallace	Unidrill - Chair

Virginia Hilliard (ADITC) and Kevin Hummel (TaPS) also attended all meetings.

The committee meetings were held:

25 March 2002	Wentworth Sydney
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03 May 2002	Phone conference
12 July 2002	Adelaide
13 August 2002	Adelaide
27 September 2002	Adelaide
21 November 2002	Adelaide
09 May 2003	Adelaide

Consultations held

Consultations were held at a range of locations over the period of the project.

Date	Location
22 May 2002	Kalgoorlie
23 May20 02	STA Consultation Adelaide
23 May 2002	Perth
23 May 2002	Adelaide
24 May2002	ADITC Directors Adelaide
30 May 2002	Brisbane
31 May 2002	Brisbane
04 June 2002	STA Consultation Sydney
06 June 2002	Auckland, NZ
17 June 2002	STA Consultation ACT
19 June 2002	Orange
25 June 2002	Sydney
26 June 2002	STA consultation, Darwin
26 June 2002	Darwin
27 June 2002	Darwin
09 July 2002	Perth
10 July 2002	Perth
12 July 2002	Adelaide
15 July 2002	National Mining ITAB, Melbourne
15 July 2002	Melbourne
19 July 2002	Rotorua, NZ

19 July 2002	Sydney
23 July 2002	Brisbane
22 July 2002	Rockhampton
24 July 2002	Greystanes, Sydney
July 2002	Alice Springs
23 July 2002	Mackay
27 July 2002	National Drillers' Licence Committee, Sydney
03 August 2002	Townsville
02 August 2002	ADITC Directors, Melbourne
26 September 2002	STA Consultation SA
01 October 2002	Curtin Uni Kalgoorlie, WA
07 October 2002	STA, Qld
07 October 2002	ANTA
08 October 2002	QMITAB
09 October 2002	Association of Piling and Foundation Specialists, Sydney
11 October 2002	Valley Longwall Pty Ltd, Qld
12 October 2002	ADIA Conference Drill 2002, Kalgoorlie
14 October 2002	National Mining ITAB
13 November 2002	Perth
12 November 2002	Kalgoorlie
13 November 2002	Adelaide
11 November 2002	Melbourne
22 November 2002	ADITC 60th Directors' Meeting
March 2003	STA NSW
07 March 2003	ADITC 70th Directors' Meeting
19 - 21 March 2003	Dalby, Qld
19 March 2003	QMITAB, Brisbane
19 March 2003	Qld Mining ITAB
19 March 2003	Qld Department of Training
19 March 2003	ANTA

07 April 2003	Adelaide
10 April 2003	Kalgoorlie
08 April 2003	Perth
09 April 2003	Perth
08 April 2003	WA Department of Training
09 April 2003	WA Department of Training
27 May 2003	Tasmanian ITAB
23 May 2003	ADITC 72nd Directors' Meeting

The industry participants

Many people made time in their busy schedule to participate in this project. Without their expertise and input, the project would not have been able to achieve its objectives and this is also gratefully acknowledged. The following participants made comment on/gave feedback to the development of DRT03:

First Name	Surname	Position	Company	State
David	Youngson	Director	Kennedy Drilling	
Paul	Fennell	Manager, Planning and Reporting, T and AE	ACT Dept Education and Community Services	ACT
Greg	Brereton	Drilling Manager	DLWC Groundwater Drilling	NSW
Carl	Tinsley	Executive Officer	NSW Mining Industry Training Advisory Body	NSW
Chris	Freer	OHST and E Manager	Valley Longwall Drilling	NSW
Andrew	Brodbeck	Senior Technical Service Engineer	Orica Australia Pty Ltd	NSW
Narelle	Campbell	Program Manager	TAFE NSW	NSW
Sean	Le	Training Package Liaison	Department of Education and Training	NSW
Jacquie	Robinson	Project Officer	Department of Education and Training	NSW
Mick	Mcgill	Technical Coordinator	Global DKI-NSW Ltd	NSW
Chris	Touhill	Principal Consultant Training and Publications	Energy Australia	NSW
Ken	Pearson	Standards and Strategic Products Engineer	Water Technology NSW Department of Public Works	NSW

Robert	James	National manager Staff Development	Network Design and Construction	NSW
Glenn	Bass	Senior Project Officer	NDC	NSW
Shannon	Barr	Market Development Manager	Vinidex	NSW
Stewart	Brown	General Manager	Ditch Witch Australia	NSW
John	Pugh	Senior Account Executive	ABEN New Apprenticeship Centre	NSW
Gil	Court	Executive Officer	MITAC	NT
Brian	Kunde	Manager - Drilling	Department of Lands, Planning and Environment	NT
Andrew	Andrejewskis	Director - Petroleum Developments	Office of Territory Developments	NT
Billy	Smith	HSE Coordinator	Woodside	NT
Jeremy	Hemphill	Assistant Director	Petroleum and Mining Support	NT
Robyn	Nuttal	Manager	Policy, Planning and Exec., DEET	NT
Rob	Floreani		Employment and Training Unit, DEET	NT
Marcia	Russell	Senior Policy Officer	Employment and Training Unit, DEET	NT
Dennis	Low	Senior Contract Supervisor	Department of Natural Resources	NT
Michael	Lane	Darwin Manager, Sunrise Gas Project	Woodside Energy Ltd	NT
Bev	Phelts	Drillers' Licensing Board	Department of Natural resources NT	NT
Mike	Ormsby		Barham United Welldrillers Ltd	NZ
Tom	Reece	Executive Officer	EXITO	NZ
Kevin	Brown	Managing Director	Kiwi Well Drillers (NZDF)	NZ
Russell	Sherwin	Director	Pro Drill (Auckland) Ltd	NZ
Ken	Garnett	Managing Director	Ken Garnett Drilling	NZ
Tony	Macpherson	Director	Drillwell Exploration	NZ
Tony	Kingan	Drilling Supervisor	Webster Drilling	NZ
Glen	Kingan	Driller	Webster Drilling	NZ

Woody	Woodford	Manager	Waimea Drilling Co Ltd	NZ
Vern	Eade	Manager	Baylis Bros Welldrilling	NZ
John	Butt	Director	Butt Drilling	NZ
Gordon	Brown	Director	Rotorua Welldrilling	NZ
Murray	Carlyle	Director	Carlyle Drilling	NZ
Dave	Clemence	Director	Clemence Drilling	NZ
Jennie	Newick	Promotions and Careers Advisor	Exito	NZ
Bill	Wanstall	HSE Coordinator	Swift Energy New Zealand	NZ
Tom		Chief Geologist	Crown Minerals, Ministry of Economic Development	NZ
Martin	Eadie	Group Manager	New Zealand Qualifications Authority	NZ
Sam	Bowler	Advisor Geologist Resource Data	Ministry of Economic Development	NZ
Jim	MacVicar	HSE Manager	Parker Drilling International	NZ
Kevin	Brown	Managing Director	Kiwi Welldrillers	NZ
Stephen	Ovens	Chief Inspector - Petroleum and Geothermal	Occupational Safety and Health	NZ
Des	Glasgow		Glasco Training	NZ
Graham	Klenner		Swift Energy NZ	NZ
Julie	Paice		Shell Todd Oil Services	NZ
Steve	Milne		Engineers, Printer and Manufactures Union	NZ
Mel	Fox		Weatherford	NZ
Peter	Kingham		Century Resources	NZ
Wendy	Devine		GPITO	NZ
Anthony	Salisbury		GPITO	NZ
Donna	Barry	Manager	GPITO	NZ
Les	Young	Project Manager	Queensland Mining ITAB	QLD
Noel	Lewis	Company Director President	Belldale Enterprises Pty Ltd ADIA Queensland Branch	QLD

Rod	McCallum	OHS and E Manager	Major Pontil Pty Ltd	QLD
Malcolm	Minnis	Consultant	MIM Services	QLD
Scott	Thorp	HS and E Field Advisor	Century Resources	QLD
Mike	Walls	Director	Australian Consolidated Exploration Pty Ltd	QLD
Rod	Brownsey	Executive Officer	Department Employment and Training	QLD
Cameron	Wright	Director/Driller	Jace Co Drilling T/A Capricorn Drilling	QLD
Barry	Gibson	Principal Technical Officer Drilling and Drillers	Department of Natural Resources and Mines	QLD
George	Tremlett	Project Manager	Queensland Mining ITAB	QLD
Quentin	Robson	General Manager Australasia Oil and Gas Division	Century Resources, A Division of Downer EDI Ltd	QLD
Angela	Allen	Senior Project Officer	ANTA	QLD
Phil	Stewart	Executive Officer	Queensland Mining ITAB	QLD
Len	Sargent	Manager	Drill-Mor Services Pty Ltd	QLD
Joanne	Behlau	Senior Project Officer	ANTA	QLD
Les	Cameron	Coordinator	Energex	QLD
Scott	Collingwood	Construction Coordinator	Energex	QLD
Dan	Uchytel	Sales Construction	Vermeer	QLD
Bruce	Keogh	Technical Officer, Drilling	Department of Natural Resources	QLD
Michael	O'Reilly	H and A Advisor	Century Resources	QLD
Bevin (Blue)	O'Shea	Manager	CICASE Pty Ltd	QLD
Karen	Reynolds	Administrator	S & K Drilling	QLD
Barbara	McKeown	Training Quality and Regulation	Department Employment and Training	QLD
Kevin	Jarick	State Operations Manager	Queensland Apprenticeship Services	QLD
Peter	Hodges	Industry Manager	Queensland Apprenticeship Services	QLD

Leigh	Adamus	Manager	Queensland Apprenticeship Services	QLD
Tim	Malony	Manager User Choice	Department Education and Training	QLD
David	Gornalle	HR Training and Safety Coordinator	Boart Longyear	QLD
Deborah	Crossing	Education and Training Manager	SA Chamber of Minerals and Energy	SA
Kevin	Rollins	Training and Development Coordinator	OD & E Pty Ltd (IADC-AC, O/G onshore)	SA
Tony	Walsh	Director	Frank Walsh Drilling Pty Ltd	SA
Neil	Dean	Operations Manager - Australia and NZ	Oil Drilling and Exploration Limited	SA
Rod	Hollingsworth	Director of Operations	Stuart Petroleum	SA
David	Grant	Group Health, Safety and Environmental Manager	Oil Drilling and Exploration Ltd	SA
Elizabeth	Owers	Principal Policy Officer	Department of Education, Training and Employment	SA
Aggie	van Eyk	Project Officer	Department of Education Training and Employment	SA
Lloyd	Moore	Drilling Supervisor	Department Water Land Biodiversity and Conservation	SA
David	Roved	Equipment Manager	Boart Longyear	SA
Sherelee	Shedden	Senior Project Officer	Office of Vocational Education and Training	SA
Aggie	Van Eyk	Project Officer	Office of Vocational Education and Training	SA
Margaret	Cottington	VET Quality Branch	Office of Vocational Education and Training	SA
Brian	Kiel	Organisational Development Manager	Boart Longyear	SA
Ily	Cava	Safety Training and Development Coordinator	Boart Longyear	SA
Stephen	Poke	Senior Manager	Boart Longyear	TAS
Gus	Gleeson	Director	G & G Drilling Pty Ltd	TAS

Ottmar	Helm	Executive Officer	Tasmanian Minerals and Processing ITB	TAS
Darren	Richardson	Director	KMR Drilling Pty Ltd	TAS
John	Palmer	OPCET	TASTA SUPPORT	TAS
Deb	Doherty	TP Review	TASTA SUPPORT	TAS
Brian T	Petty	Senior Vice President - Government Affairs	International Association of Drilling Contractors	USA
Ian	Fry	Manager	Strata Drilling Australia Pty Ltd	VIC
Tony	Russo	Director	Bayside Boring (Australia)	VIC
Bill	Sides	Managing Director	Sides Engineering Pty Ltd	VIC
Rob	Verkaik	Manager	Access Boring	VIC
Graeme	Drew	Driller	Goulburn Valley Bore and Construction Maintenance	VIC
David	Henry	Manager	Henry Drilling	VIC
Jennifer	Chambers	Driller's Assistant	Henry Drilling	VIC
Warren	Burns	Manager	Geodrill Assessment and Training Services	VIC
John	Hurley	General Manager	International Sea Drilling Ltd	VIC
Judy	Stewart	Director/Administrator	GV Bore Construction and Maintenance	VIC
Joshua	Pilmore	Driller's Assistant	Powerbond Drilling	VIC
Klaus	Strossa	Driller's Assistant	Powerbond Drilling	VIC
Jim	Hall	Managing Director	Co-Plant Australia Pty Ltd	VIC
Kranstan	Bradley	Safety/Personnel Supervisor	Nabors Drilling International	VIC
Dan	Ahern	Senior Safety Consultant	Safety and Risk Practice Pty Ltd	WA
Leigh	Davies	Managing Director	Davies International Pty Ltd	WA
Scott	Milling	Manager	Westralian Diamond Drillers Pty Ltd	WA
Steven	Swallow	Manager	Sanderson Drilling Contractors	WA
Greg	Scanlon	Manager	Scanlon Drilling Company	WA
Derek	Morrow	Operations Manager	Atwood Oceanics (IADC-AC, O/G off shore)	WA

Lindsay	Boyle	Managing Director	LA Boyle Drilling Pty Ltd	WA
Don	Sanders	Director, Education and Training	APPEA	WA
Steve	Starling	Managing Director	Meta Management Group	WA
Paul	Van Loenhout	Principal (Company Director)	Mt. Magnet Drilling	WA
Jeff	Pace	Secretary - Treasurer	Australasian Society of Trenchless Technology	WA
Robbie	Butchart		Redmond Drilling	WA
Grahame	Woodruffe	Driller Training	CMC TAFE	WA
Brett	Dorney	Employment Programs Branch	Department of Training	WA
Wayne	Muller	Manager Training Package Information	Department of Training	WA
John	Feodorovs	General Manager Australia and Indonesia	Bonus Well Servicing (WA) Pty Ltd	WA
John	Robertson	Technical Director	Australian Competitive Energy	WA
Geoff	Large	Managing Director	Good Doogs	WA
Alf	Standen	Principal Consultant	Training and Assessment Services	WA
Elizabeth	Pickering	Administrator, Drillers' Licensing	ADIA WA	WA
Andrew	Ogden	Managing Director	Western Drilling	WA
Kevin	McCloy	Safety and Training Coordinator	Ausdrill	WA
Damien	Woods		Scanlon Drilling	WA
Kay	Scanlon	Director	Scanlon Drilling	WA
Cynthia	Plant	Administrator	Drilltorque (Aust) Pty Ltd	WA
Mike	Gillespie	Training Manager	Industrial Foundation for Accident Prevention	WA
Marina	Parkin	Administrator	Transocean SedcoForex	WA
Tom	Civiello	Managing Director	OIM Resources	WA
Chris	Watson	Manager	Industrial Foundation for Accident Prevention	WA
Mike	Jakins	Executive Officer	Process Manufacturing ITC	WA

Peter	Ward	Senior Policy Officer	Department of Training	WA
David	Johnson	HSE and QA Manager	Diamond Offshore General Company	WA
Peter	Ritchie	HSE and QA Assistant	Diamond Offshore General Company	WA
Frank	Barker	Drilling Superintendent	Woodside Energy Ltd	WA
Greg	Stagbouer	Safety and Training Manager	Grimwood Davies	WA
Kevin	Clark	Senior Operations Manager	Grimwood Davies	WA
Andrew	Ogdon	Director/President	Weston Drilling ADIA WA	WA
Brian	Mann	Managing Director	Ausdrill	WA
Jamie	Seed	Managing Director	Challenge Drilling	WA
Michael	Martin	Managing Director	G.K Laynk	WA
Lyn	Kennedy	Managing director	Kennedy Drolling	WA
Frank	Robinson	Managing Director	Resource Driling	WA
Scott	Milling	Managing Director	Westralian Diamond Drilling	WA
Lindsay	Boyle	Managing Director	LA Boyle	WA
Warren	Strange	Managing Director	Strange Drilling	WA
Peter	Ward	Senior Policy Officer	Department of Education and Training	WA
Nigel	Haywood	Director	Department of Education and Training	WA
Anna	Carlino	Senior Policy Officer	Department of Education and Training	WA
Margaret	Ng	Senior Planning Officer	Department of Education and Training	WA
Robin	Hill		Surplus Equipment Brokers	WA
Alison	Whitley	Senior Manager	Curtin Training solutions, Curtin University	WA
Sheryl	Liddicoat		Curtin Training solutions, Curtin University	WA
Ron	Sayers	Manager	Ausdrill	WA
David	Stevens	Secretary	MDAA	WA

Graham	Wallis	President	MDAA	WA
Brenton	Wallace		MDAA	WA
Mark	Forster		MDAA	WA
Ken	Macleay		MDAA	WA

Industry contacts

A broad range of industry personnel were contacted and kept informed of the DRT review project. Many of these people/organisations participated in the wider discussions and made their feedback though one or more of the above.

Changes resulting from the review

General comments

DRT98 has been extensively reviewed. The non-hydrocarbon sector in particular is significantly different in DRT03 to DRT98. The introductory level units have been rewritten and 'method of drilling' units have been added at Certificate II and III levels. The drilling sectors have also been reviewed with some additional units being written for new sectors. Some additional/new units have been imported from other relevant Training Packages such as business, civil construction and mining.

DRT03 treats the oil/gas sector in a similar manner to DRT98. However, in DRT98 there were a range of units where there was significant similarity and this has been removed by merging these units. Otherwise there is little change in the oil/gas sector.

Assessment guidelines

DRT03 has adopted the ANTA model assessment guidelines as required. The implementation of these will be similar to the existing assessment guidelines. These model guidelines have been customised by the addition of Section 5 - Recommendations for assessment in the drilling industry.

Qualifications Framework

Packaging rules

The packaging rules are similar to those existing in DRT98. The format of the Qualifications Framework however has changed to improve the clarity while retaining popular features.

As with DRT98, there are a range of electives made available, and a different number of units may be required for different sectors depending on need. To satisfy the need for clarity by the State and Territory Training Authorities the number of units required for a qualification has been stated for each qualification. This represents the minimum number required for the award of the qualification, and is the number which will be funded, should public funding be provided for training in this industry. This number in no way restricts the number of units in which competency may be achieved, or which may be required by organisations within the industry.

Transition arrangements

People with existing qualifications from DRT98 will still have that qualification recognised.

People who have some units of competency recognised (while not having a full qualification)

should have the equivalent unit of competency in DRT03 granted and then be assessed for the relevant qualification under DRT03.

Units of competency

Most units of competency have been carried forward, although there may be changes to the title and code. Most units will have been updated. Many new units have been added in the non-hydrocarbon sector.

Imported units

Wherever possible, existing units of competency from other endorsed Training Packages have been imported to DRT03. These units are reproduced in full, with the original codes of the source Training Package.

The most recent version of all imported units has been used.

Common units

Common units are required by everyone obtaining a qualification of that level within one of the two major sectors of non-hydrocarbon or oil/gas.

Method units

The method units are to do with the method of drilling. At least one method unit is required to be a competent driller, or assistant driller for the non-hydrocarbon sector. Many jobs/organisations will require more than one method and this will be recognised by a statement of attainment. The oil/gas sector has a different structure where the method units are built in.

Sector/elective units

In order to present to the industry the full range of units which may be required, DRT03 (as did DRT98) provides a range of sector specific and elective units which may be required by an organisation or for a job, but which may not be required by others in the same sector. These units may be selected without restriction, but unless otherwise stated are not normally required for a qualification.

Industry coverage

Australian Drilling Industry Training Committee Ltd

The Australian Drilling Industry Training Committee Ltd (ADITC Ltd) was formed in 1978, and developed into its current form in 1983. The company is a not-for-profit industry organisation for the drilling industry, with a national responsibility to the drilling industry for the management of the competency standards and qualifications across all sectors of the industry. ADITC Ltd also carries out relevant research services and training related services for the industry.

Nature of work of the drilling industry

Drilling involves the use of heavy machinery to break through the earth's surface. It is an essential industry.

Drilling is carried out in every State and Territory of Australia, including the Antarctic, and in the seas surrounding it.

The industry has the following sectors:

- blast hole drilling
- environmental drilling
- foundation/construction drilling (including piling)
- geotechnical drilling
- mineral exploration
- mineral production
- oil, gas and geothermal, off shore
- oil, gas and geothermal, on shore
- raiseboring
- seismic
- trenchless technology (including horizontal directional drilling)
- water well drilling.

The drilling industry has its own identity and supports the activities of a range of other industries.

Drilling results define mineral reserves for future mining prospects, and play a key role in the extraction process. Drillers access ground water supply for commercial, domestic, stock, irrigation or town water supply use. Water well drilling provides water supply for most of rural and regional Australia, and significant urban water (for example, 78% of Perth's water, and 92% of Darwin's), a particularly vital issue in Australia, the world's driest continent.

Drillers carry out site investigation drilling to allow the design of foundations and to ensure the stability of major civil works such as bridges and buildings. Pile driving and extraction plays an important role in irrigation and environment solutions to water conservation and land erosion. Environmental drilling defines areas of suspected contaminated land, the first stage in the remediation process. Drillers help to locate areas of sub-surface contamination and assist in the remediation process. Drilling defines and accesses vital oil, gas and geothermal power for domestic and commercial uses both nationally and internationally. Trenchless technology/horizontal directional drilling supports the utilities and communications industries, and contributes to the transmission of energy resources.

Of drilling contractors who responded to the Survey of the Drilling Industry in February 2003, 70% worked in more than one sector of drilling.

The industry has some salient features which impact strongly on its operations:

- a high number of employees who have been employed in the industry for many years, but have rarely been employed in one company for a prolonged period
- a high turnover of employees at individual company level
- a largely rural/regional work circumstance
- a very highly mobile workplace (rigs move all the time)
- high plant costs and high consumables costs
- heavy work and high insurance costs
- a very high proportion of people who run micro-businesses
- only recent access to a means of providing national qualifications to personnel.

Dimensions of the Australian drilling industry

Number of employees in the industry

The estimated total industry figure based on the information below is between 38,000 - 39,000. This is 0.2% of the Australian population, which stands at 19,387,000 (ABS Census 2001).

There is no neat, publicly accessible source of this information.

Contribution to GDP

The estimated value of the drilling industry in 2001/2002 extrapolated as 0.78% of 2001/2002 GDP (which was \$695.9 billion) was \$5.428 billion.

The estimated value of the drilling industry in 1999/2000 extrapolated as 0.78% of 1999/2000 GDP (which was \$621.3 billion) was \$4.85 billion.

Large, medium and small enterprises in the industry

Small companies are defined as <5 employees; medium companies 5 - 100 employees; large companies >100 employees. Very few companies in the industry have more than 500 employees.

Of respondents to the Survey of the Drilling Industry 2003, the following profile was established:

- 5% had 500+ employees
- 15% had 100 - 499 employees
- 5% had 50 - 99 employees
- 15% had 21 - 49 employees
- 35% had 5 - 20 employees
- 25% had <5 employees

Information from the Australian Drilling Industry Association indicates that their current membership comprises 1% large companies, 15% medium companies and 83% small companies. This is held to be a fair picture of the industry sectors they represent (ADIA 2003).

By the nature of the work and/or plant cost, some sectors, such as the Water well sector and the Directional Drilling sector, are exclusively small to medium companies. Others such as Oil and Gas Drilling, on shore and off shore are almost exclusively large companies, or operational divisions of large companies.

The effect of the recent industry downturn and the low Australian dollar has been the aggregation of both drilling companies (such as Transocean Sedco Forex and Drillcorp Western Deephole Pty Ltd) and mining companies (such as BHP/Billiton). This has meant a diminished number of contractors providing services to a diminished number of client companies. Furthermore, the client companies are acquiring smaller companies to avoid

exploration costs. This means that at present it is difficult to determine precise numbers of companies in a volatile time in the industry both nationally and internationally.

Information from the International Association of Drilling Contractors, Australasian Chapter, indicates that there are currently six off shore and four on shore oil and gas drilling contractors working in Australia and Australian waters. All are large companies (IADC-AC 2002).

Information from the Australasian Society for Trenchless Technology indicates that there is strong growth in the numbers of companies in the industry. Companies in membership are mostly medium and small, with several government instrumentalities. Current membership of the Association stands at 211 companies, but many small contractors are not members (Australia-New Zealand Trenchless Tech Guide Members Directory of Services, June 2000, ASTT).

Water well drilling company numbers and personnel may be estimated from the numbers of current licences held, and information on companies in the sector. There are understood to be about 1,645 companies engaged in the sector. These are generally micro-businesses employing two or three people each though two are of small size with 30 employees each. There are 858 current applicants for licences in the Water well sector (National Drillers Licensing figures March 2003). Additionally, three state governments maintain drilling sections within Departments of Resources, Natural Resources, Water Management or Lands, Planning and Environment. These may have up to 20 personnel in each. Thus the estimated number of personnel employed in the Water well sector is a total of between 5,500 and 6,000.

Extensive work is done by these water well drilling businesses. For example, in the last 5 years in South Australia, 9,000 bores have been sunk for stock and domestic, irrigation, town water and monitoring purposes. There is strong growth in the sector due to the increased demand for groundwater in the current drought, and also a more sustained projection due to higher focus on water management by government and environmental bodies.

Extent of geographic spread of the industry

Drilling is carried out in every State and Territory of Australia, including the Antarctic, and in the seas surrounding it. All sectors of the industry are represented in Australia.

The nature of drilling work means that most drilling industry personnel work in isolated, rural and regional locations, and that the location of work frequently moves. Some sectors, such as trenchless technology, are predominantly urban-based.

Many companies work both within Australia and overseas, particularly the mineral exploration, geotechnical and oil and gas sectors. Of drilling contractors who responded to the Survey of the Drilling Industry in February 2003, 48% worked both in Australia and overseas and 65% indicated that they worked in more than one state.

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) or obtain a hard copy by contacting AQFAB on phone 03 9639 1606 or by emailing AQFAB on 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.

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.

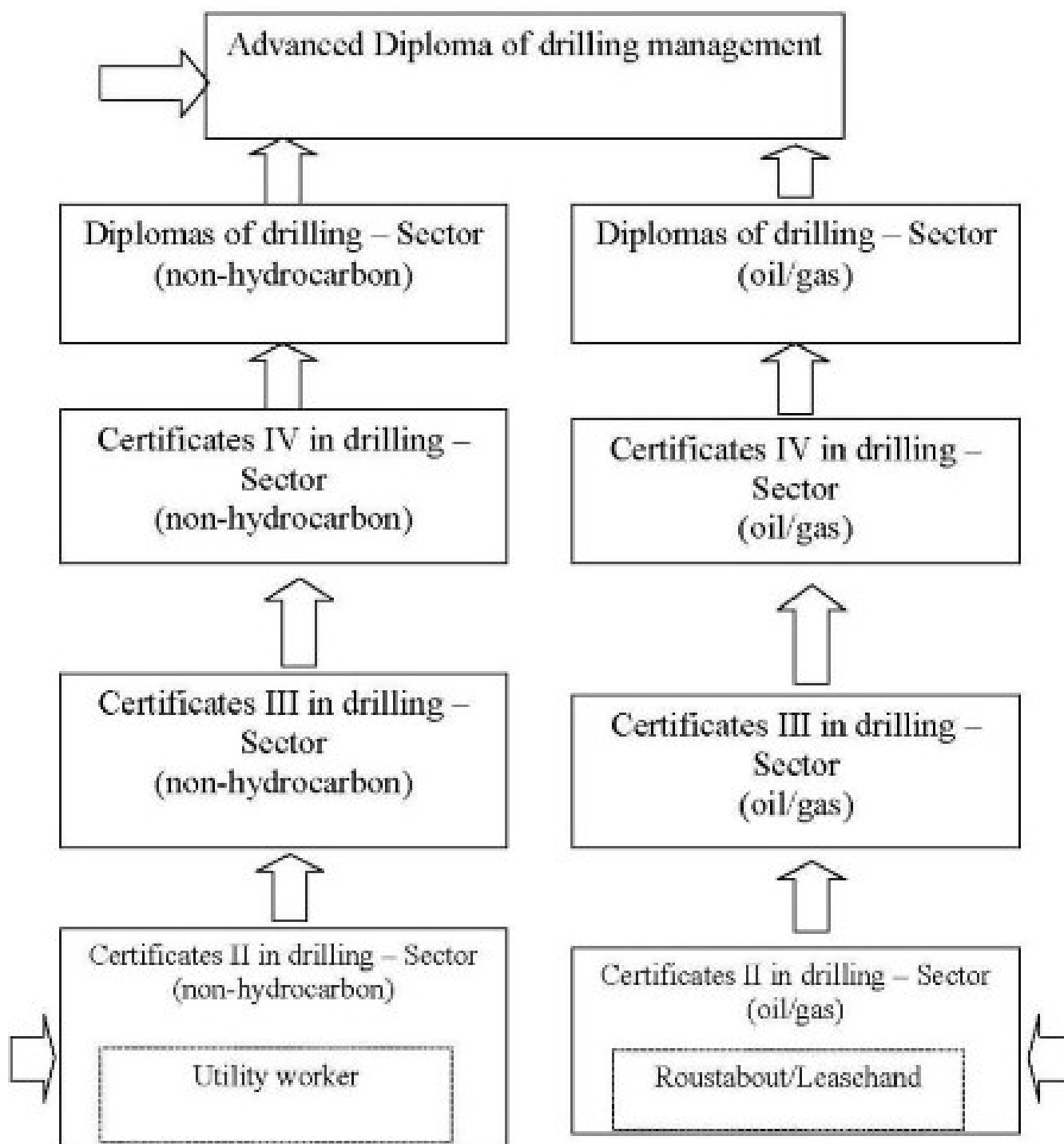
In an assessment of existing competency, it is possible to assess the unit and its prerequisites together as an integrated assessment. In this situation a unit with two prerequisites will be counted as three units towards the qualification once competency has been attained in all units.

See also qualification rules later in this document.

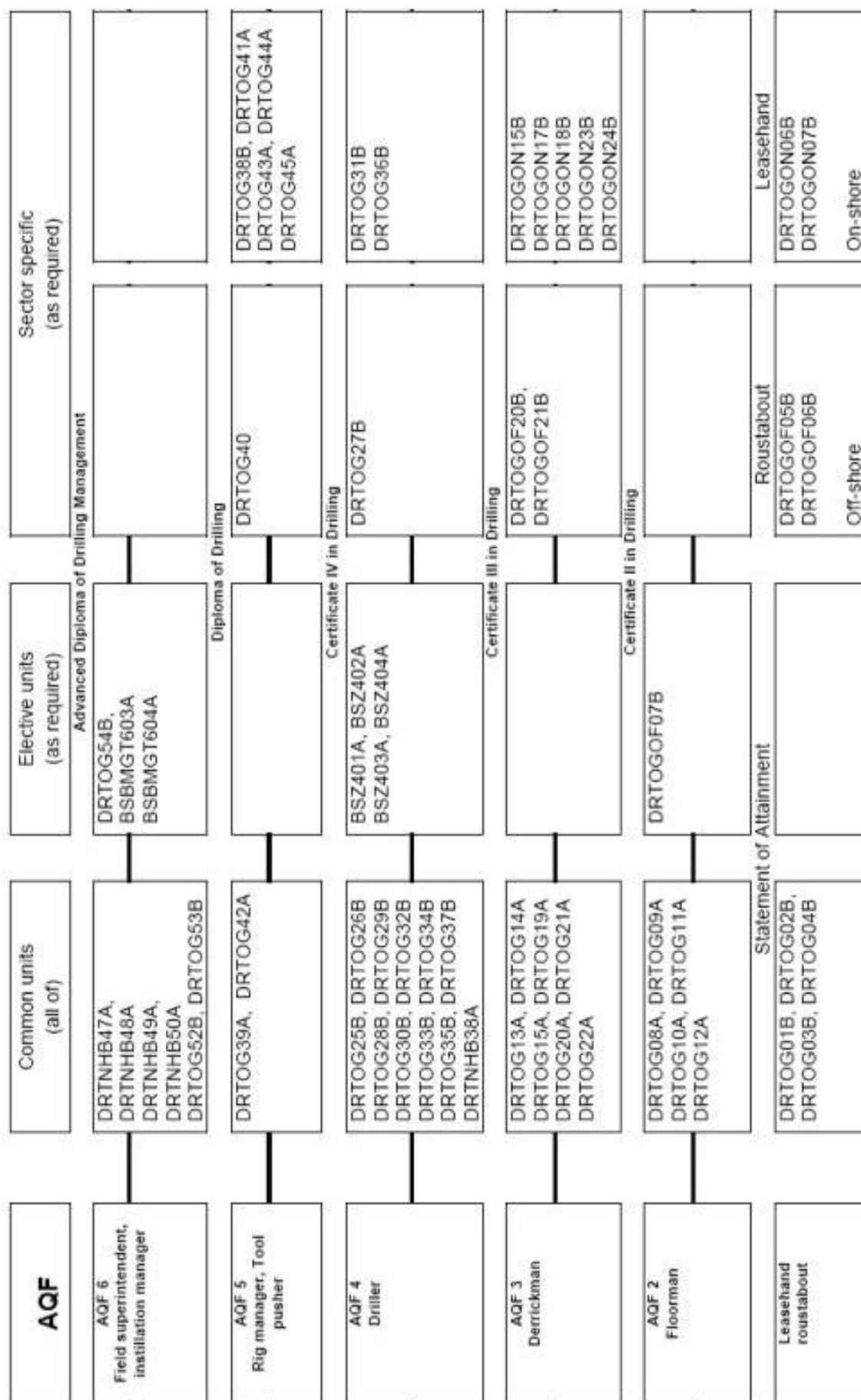
Drilling qualifications at a glance

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.



Qualifications structure - Drilling industry qualifications - oil/gas sector



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 DRTOG2B, DRTOG3B	DRTOG4B BSBMGT60A BSBMGT60A	*	*	*	*	*	*	*	*	*	
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, BSBRSM4402A BSBRSM4403A, BSBRSM4404A BSBSM4405A, BSBSM4406A BSBSM4407A	*	*	*	*	*	*	*	*	*	DRTNHR44A DRTNHR45A
Certificate III in Drilling												
AQF 3 Driller	DRTNHR20A, DRTNHR21A DRTNIB32A, DRTNIB23A	DRTNHR24A BSGRKC304A	DRTNIB24	*	BSZ204	DRTNHR24						DRTNHR25A DRTNHR26A
Certificate II in Drilling												
AQF 2 Drillers assistant	DRTNHR05A, DRTNHR06A DRTNIB07A, DRTNIB04A DRTNIB03A, DRTNIB01A	DRTNIB02A, BCC1004A BCC1003A, MNC.G38.A		*	BCC2009							DRTNHR25A DRTNHR26A
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 Guided	14 Directional	15 Mud	16 Raise	17 Cable	18 DIHH	19 THH	27 Air	28 Auger	29 Large Auger	30 Conv Core	31 Wire C	32 Guided	33 Directional	34 Ream	35 Pipe	36 Mud	37 Raise	38 Cable	39 DIHH	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																		
Min Prod & Dev	X	X	X	X	X	X	C	C	C	C	X	X														M																			
Blast Hole	X	X	X	X	X	X	C	C	C	C	X	X														M																			
Seismic	X	X	X	X	X	X	C	C	C	C																																			
Water well	X	X	X	X	X	X	C	C	C	C		E	S	S												X	X																		

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.

Employability Skills

Employability Skills replacing Key Competency information from 2006

In May 2005, the approach to incorporate Employability Skills within Training Package qualifications and units of competency was endorsed. As a result, from 2006 Employability Skills will progressively replace Key Competency information in Training Packages.

Background to Employability Skills

Employability Skills are also sometimes referred to as generic skills, capabilities or Key Competencies. The Employability Skills discussed here build on the Mayer Committee's Key Competencies, which were developed in 1992 and attempted to describe generic competencies for effective participation in work.

The Business Council of Australia (BCA) and the Australian Chamber of Commerce and Industry (ACCI), produced the *Employability Skills for the Future* report in 2002 in consultation with other peak employer bodies and with funding provided by the Department of Education, Science and Training (DEST) and the Australian National Training Authority (ANTA). Officially released by Dr Nelson (Minister for Education, Science and Training) on 23 May 2002, copies of the report are available from the DEST website at:

http://www.dest.gov.au/archive/ty/publications/employability_skills/index.htm.

The report indicated that business and industry now require a broader range of skills than the Mayer Key Competencies Framework and featured an Employability Skills Framework identifying eight Employability Skills*:

- communication
- teamwork
- problem solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology.

The report demonstrated how Employability Skills can be further described for particular occupational and industry contexts by sets of facets. The facets listed in the report are the aspects of the Employability Skills that the sample of employers surveyed identified as being important work skills. These facets were seen by employers as being dependent both in their nature and priority on an enterprise's business activity.

*Personal attributes that contribute to employability were also identified in the report but are not part of the Employability Skills Framework.

Employability Skills Framework

The following table contains the Employability Skills facets identified in the report *Employability Skills for the Future*.

Skill	Facets
	Aspects of the skill that employers identify as important. The nature and application of these facets will vary depending on industry and job type.
Communication that contributes to productive	<ul style="list-style-type: none">• listening and understanding• speaking clearly and directly

and harmonious relations across employees and customers	<ul style="list-style-type: none"> • writing to the needs of the audience • negotiating responsively • reading independently • empathising • using numeracy effectively • understanding the needs of internal and external customers • persuading effectively • establishing and using networks • being assertive • sharing information • speaking and writing in languages other than English
Teamwork that contributes to productive working relationships and outcomes	<ul style="list-style-type: none"> • working across different ages irrespective of gender, race, religion or political persuasion • working as an individual and as a member of a team • knowing how to define a role as part of the team • applying teamwork to a range of situations e.g. futures planning and crisis problem solving • identifying the strengths of team members • coaching and mentoring skills, including giving feedback
Problem solving that contributes to productive outcomes	<ul style="list-style-type: none"> • developing creative, innovative and practical solutions • showing independence and initiative in identifying and solving problems • solving problems in teams • applying a range of strategies to problem solving • using mathematics, including budgeting and financial management to solve problems • applying problem-solving strategies across a range of areas • testing assumptions, taking into account the context of data and circumstances • resolving customer concerns in relation to complex project issues
Initiative and enterprise that contribute to innovative outcomes	<ul style="list-style-type: none"> • adapting to new situations • developing a strategic, creative and long-term vision • being creative • identifying opportunities not obvious to others • translating ideas into action • generating a range of options • initiating innovative solutions
Planning and organising that contribute to long and short-term strategic planning	<ul style="list-style-type: none"> • managing time and priorities - setting time lines, coordinating tasks for self and with others • being resourceful • taking initiative and making decisions • adapting resource allocations to cope with contingencies • establishing clear project goals and deliverables • allocating people and other resources to tasks • planning the use of resources, including time management • participating in continuous improvement and planning processes • developing a vision and a proactive plan to accompany it

	<ul style="list-style-type: none"> • predicting - weighing up risk, evaluating alternatives and applying evaluation criteria • collecting, analysing and organising information • understanding basic business systems and their relationships
Self-management that contributes to employee satisfaction and growth	<ul style="list-style-type: none"> • having a personal vision and goals • evaluating and monitoring own performance • having knowledge and confidence in own ideas and visions • articulating own ideas and visions • taking responsibility
Learning that contributes to ongoing improvement and expansion in employee and company operations and outcomes	<ul style="list-style-type: none"> • managing own learning • contributing to the learning community at the workplace • using a range of mediums to learn - mentoring, peer support and networking, IT and courses • applying learning to technical issues (e.g. learning about products) and people issues (e.g. interpersonal and cultural aspects of work) • having enthusiasm for ongoing learning • being willing to learn in any setting - on and off the job • being open to new ideas and techniques • being prepared to invest time and effort in learning new skills • acknowledging the need to learn in order to accommodate change
Technology that contributes to the effective carrying out of tasks	<ul style="list-style-type: none"> • having a range of basic IT skills • applying IT as a management tool • using IT to organise data • being willing to learn new IT skills • having the OHS knowledge to apply technology • having the appropriate physical capacity

Employability Skills Summary

An Employability Skills Summary exists for each qualification. Summaries provide a lens through which to view Employability Skills at the qualification level and capture the key aspects or facets of the Employability Skills that are important to the job roles covered by the qualification. Summaries are designed to assist trainers and assessors to identify and include important industry application of Employability Skills in learning and assessment strategies.

The following is important information for trainers and assessors about Employability Skills Summaries.

- Employability Skills Summaries provide examples of how each skill is applicable to the job roles covered by the qualification.
- Employability Skills Summaries contain general information about industry context which is further explained as measurable outcomes of performance in the units of competency in each qualification.
- The detail in each Employability Skills Summary will vary depending on the range of job roles covered by the qualification in question.
- Employability Skills Summaries are not exhaustive lists of qualification requirements or checklists of performance (which are separate assessment tools that should be

designed by trainers and assessors after analysis at the unit level).

- Employability Skills Summaries contain information that may also assist in building learners' understanding of industry and workplace expectations.

Qualifications

DRT20103 Certificate II in Drilling - Environmental

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The Certificate II in Drilling - Environmental reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Environmental:

- 7 or more units :

- All Common Units

Common Units (refer to the unit list at the end of this section)

- and a minimum of one of the following Method units:

- Method Units

Method Units (refer to the unit list at the end of this section)

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from the following groups:

- Other Electives

Electives (refer to the unit list at the end of this section)

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common Units

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Electives

Code	Title
BCCCM2013B	Control traffic with a stop-slow bat
MNCG1038A	Perform basic cutting and welding

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a

	<ul style="list-style-type: none"> safety context Contribute to the planning and execution of operations Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> Adjust work methods in response to changing weather and site conditions Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> Independently adapt to changing work conditions or different work areas Identify potential improvements to working practice and conditions Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> Manage time and priorities to complete work Identify and obtain appropriate equipment and permits Identify potential hazards and prepare appropriate responses Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> Take responsibility for planning and organising own work priorities and completing assigned tasks Monitor own performance to ensure work will be completed well and on time Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> Be willing to learn new ways of working Seek information to improve performance from people and workplace documents like policies, procedures etc. Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> Use technology to monitor and report on work progress Use communications technology appropriate to the workplace (email, mobile, radio, etc) Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20203 Certificate II in Drilling - Foundation/Construction

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the construction industry and their relevant Training Packages.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Foundation/Construction* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes. The foundation sector drills holes for the building and civil construction industry.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Foundation/Construction:

- **8 or more units comprised of:**

- **All Common units**

- Common (refer to the unit list at the end of this section)*

- **and all of the Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following method units:**

- DRTNHB09A Assist continuous flight auger drilling

- DRTNHB10A Assist large diameter auger drilling

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Other Electives

Code	Title
BCCCM2004B	Drain and dewater site
BCCCM2013B	Control traffic with a stop-slow bat
MNCG1038A	Perform basic cutting and welding

Sector Units

Code	Title
BCCCM2003B	Read and interpret plans and specifications

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB10A	Assist large diameter auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender,

race, religion or political persuasion

Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20303 Certificate II in Drilling - Geotechnical

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Geotechnical* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Geotechnical:

- **7 or more units :**

- **All Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Method units:**

- **Method Units**

- Method Units (refer to the unit list at the end of this section)*

- Note: One or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from the other electives below:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling

Other Electives

Code	Title
BCCCM2013B	Control traffic with a stop-slow bat
MNCG1038A	Perform basic cutting and welding

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving

- Adjust work methods in response to changing weather and

	<ul style="list-style-type: none"> site conditions Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> Independently adapt to changing work conditions or different work areas Identify potential improvements to working practice and conditions Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> Manage time and priorities to complete work Identify and obtain appropriate equipment and permits Identify potential hazards and prepare appropriate responses Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> Take responsibility for planning and organising own work priorities and completing assigned tasks Monitor own performance to ensure work will be completed well and on time Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> Be willing to learn new ways of working Seek information to improve performance from people and workplace documents like policies, procedures etc. Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> Use technology to monitor and report on work progress Use communications technology appropriate to the workplace (email, mobile, radio, etc) Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20403 Certificate II in Drilling - Trenchless Technology

Rationale :

This is a new qualification.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Trenchless Technology* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Trenchless Technology:

- **7 or more units :**

- **All Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Method units:**

- Method Units (refer to the unit list at the end of this section)*

- **Method Units**

- Method Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB13A	Assist guided boring
DRTNHB14A	Assist directional drilling

Other Electives

Code	Title
BCCCM2013B	Control traffic with a stop-slow bat
MNCG1038A	Perform basic cutting and welding

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving

- Adjust work methods in response to changing weather and site conditions
- Participate in team solutions to safety issues

Initiative and enterprise

- Independently adapt to changing work conditions or different

	work areas
	<ul style="list-style-type: none"> • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20503 Certificate II in Drilling - Mineral Exploration

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The Certificate II in Drilling - Mineral Exploration reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Mineral Exploration:

- **Competency is required in the Utility Worker Statement of Attainment in the following 2 Units:**
 - **DRTNHB01A Follow workplace health, safety and environment procedures**
 - **and DRTNHB03A Work effectively in the drilling industry**
- **and 5 or more units :**
 - **All Common units**
Common (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Method units**
 - **Method Units**
Method Units (refer to the unit list at the end of this section)
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB07A	Support drilling process

Core Units referenced in the Packaging Rules

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling

Other Electives

Code	Title
DRTNHB02A	Follow underground health and safety procedures
DRTOG55A	Support blow out prevention operations
DRTOG56A	Assist withy coal seam gas control
MNCG1038A	Perform basic cutting and welding

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20603 Certificate II in Drilling - Mineral Production and Development

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This qualification includes the sub-sectors of:

- raiseboring
- underground.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Mineral Production and Development* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes. This sector typically works in mines and so the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may also need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Mineral Production and Development:

- **9 or more units :**
 - **All Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **2 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 3 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Method units:**
 - **Method Units**
Method Units (refer to the unit list at the end of this section)
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB16A	Assist raiseboring
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling

Other Electives

Code	Title
MNMOCC428A	Operate mine services vehicle
MNMPRD116A	Take samples
MNMUGC432A	Operate equipment services vehicle underground

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20703 Certificate II in Drilling - Blast Hole

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This qualification includes the sub-sectors of:

- blast hole.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Blast Hole* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes. This sector may work in mines and so the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may also need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Blast Hole:

- **9 or more units :**
 - **All Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **2 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 3 Underground**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Method units:**
 - **Method Units**
Method Units (refer to the unit list at the end of this section)
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling

Other Electives

Code	Title
MNMOCC428A	Operate mine services vehicle
MNMPRD116A	Take samples
MNMUGC432A	Operate equipment services vehicle underground

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill

Industry/enterprise requirements for this qualification include:

Communication	<ul style="list-style-type: none">• Speak clearly and directly• Listen carefully to instructions and information• Read and interpret work instructions and safety signs• Calculate basic weights, distances and volumes• Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none">• Apply teamwork in a range of situations, particularly in a safety context• Contribute to the planning and execution of operations• Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none">• Adjust work methods in response to changing weather and site conditions• Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none">• Independently adapt to changing work conditions or different work areas• Identify potential improvements to working practice and conditions• Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none">• Manage time and priorities to complete work• Identify and obtain appropriate equipment and permits• Identify potential hazards and prepare appropriate responses• Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none">• Take responsibility for planning and organising own work priorities and completing assigned tasks• Monitor own performance to ensure work will be completed well and on time• Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none">• Use technology to monitor and report on work progress• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20803 Certificate II in Drilling - Oil/Gas Off shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Oil/Gas Off Shore* reflects the role of employees such as a floorman who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Oil/Gas Off shore:

- **Roustabout Statement of Attainment:**

- **All common oil/gas units**

- Common oil/gas (refer to the unit list at the end of this section)*

- **and all of the following Sector units:**

- Sector Units (refer to the unit list at the end of this section)*

- **Sector Units**

- Sector Units (refer to the unit list at the end of this section)*

- **and Requirements for Certificate II**

- **5 common oil/gas floorman units**

- Common oil/gas floorman (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common oil/gas

Code	Title
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

Common oil/gas floorman

Code	Title
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
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
DRTOG12B	Perform rig floor operations

ELECTIVE UNITS

Other Electives

Code	Title
DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations

Sector Units

Code	Title
DRTOGOF05B	Carry out deck operations
DRTOGOF06B	Handle and store cargo
DRTOGOF09B	Contribute to the control of offshore emergencies

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs

	<ul style="list-style-type: none"> • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT20903 Certificate II in Drilling - Oil/Gas On shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Oil/Gas On Shore* reflects the role of employees such as a floorman who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Oil/Gas On shore:

- **Leasehand Statement of Attainment:**

- **Competency is required in the following 6 units:**

- **4 Common units**

- Leasehand Common (refer to the unit list at the end of this section)*

- **and 2 Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- **and Requirements for Certificate II:**

- **5 Common Oil / Gas Floorman units**

- Common oil/gas floorman (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common oil/gas floorman

Code	Title
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
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
DRTOG12B	Perform rig floor operations

Leasehand Common

Code	Title
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

ELECTIVE UNITS

Sector Units

Code	Title
DRTOGON06B	Carry out rig lease operations
DRTOGON07B	Move loads

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT21003 Certificate II in Drilling - Seismic

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Seismic* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Seismic:

- **7 or more units :**

- **6 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Method units:**

- **Method Units**

- Method Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling

Other Electives

Code	Title
MNCG1038A	Perform basic cutting and welding

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving

- Adjust work methods in response to changing weather and site conditions
- Participate in team solutions to safety issues

Initiative and enterprise

- Independently adapt to changing work conditions or different work areas

	<ul style="list-style-type: none"> • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT21103 Certificate II in Drilling - Water Well

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate II in Drilling - Water Well* reflects the role of employees such as drillers' assistants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate II in Drilling - Water Well:

- **7 or more units :**

- **All Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Method units:**

- **Method Units**

- Method Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process

ELECTIVE UNITS

Method Units

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling

Other Electives

Code	Title
MNCG1038A	Perform basic cutting and welding

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving

- Adjust work methods in response to changing weather and site conditions
- Participate in team solutions to safety issues

Initiative and enterprise

- Independently adapt to changing work conditions or different work areas

	<ul style="list-style-type: none">• Identify potential improvements to working practice and conditions• Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none">• Manage time and priorities to complete work• Identify and obtain appropriate equipment and permits• Identify potential hazards and prepare appropriate responses• Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none">• Take responsibility for planning and organising own work priorities and completing assigned tasks• Monitor own performance to ensure work will be completed well and on time• Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none">• Use technology to monitor and report on work progress• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30103 Certificate III in Drilling - Environmental

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Environmental* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Environmental:

- **13 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records

Sector Units

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30203 Certificate III in Drilling - Foundation/Construction

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the construction industry and their relevant Training Packages.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Foundation/Construction* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures. The foundation sector drills holes for the building and civil construction industry.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Foundation/Construction:

- **14 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and 2 Sector units**
Sector Units (refer to the unit list at the end of this section)
 - **and 1 or more of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB10A Assist large diameter auger drilling
 - DRTNHB29A Conduct large diameter auger drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records

Sector Units

Code	Title
BCCCM2003B	Read and interpret plans and specifications
BCCRC2008B	Lay pipes

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB10A	Assist large diameter auger drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB29A	Conduct large diameter auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes

	<ul style="list-style-type: none"> • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30303 Certificate III in Drilling - Geotechnical

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Geotechnical* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Geotechnical:

- **13 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records

Sector Units

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30403 Certificate III in Drilling - Trenchless Technology

Rationale :

This is a new qualification.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Trenchless Technology* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Trenchless Technology:

- **11 or more units :**

- **10 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Method units:**

- **Method Units**

- Method Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Method Units

Code	Title
BCCTT3001B	Conduct fluid assisted directional boring
BCCTT3002B	Conduct impact moling, ramming and augering
BCCTT3003B	Control micro tunnelling and pipejacking
DRTNHB32A	Conduct guided boring
DRTNHB33A	Conduct directional drilling
DRTNHB34A	Conduct reaming
DRTNHB35A	Install product pipe
DRTOGOF21B	Operate drilling fluids and mud pits
DRTOGON24B	Operate mud systems

Other Electives

Code	Title
BSBRKG304A	Maintain business records

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30503 Certificate III in Drilling - Mineral Exploration

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Mineral Exploration* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Mineral Exploration:

- **12 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records
DRTNHB02A	Follow underground health and safety procedures
DRTOG55A	Support blow out prevention operations
DRTOG56A	Assist with coal seam gas control
DRTOGOF21B	Operate drilling fluids and mud pits
DRTOGON24B	Operate mud systems
MNMMNI401A	Administer shotfiring activities

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30603 Certificate III in Drilling - Mineral Production and Development

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This unit covers the sub-sectors of:

- raiseboring
- underground.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Mineral Production and Development* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures. The sector works in the mining industry and the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Mineral Production and Development:

- **14 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **3 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB16A Assist raiseboring
 - DRTNHB37A Conduct raiseboring
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records
MNMUGC102A	Conduct ground support operations
MNMUGC432A	Operate equipment services vehicle underground
MNMUGC439A	Conduct mechanical scaling

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB16A	Assist raiseboring
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling

Code	Title
DRTNHB27A	Conduct air drilling
DRTNHB37A	Conduct raiseboring
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures

Technology

- Use technology to monitor and report on work progress
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30703 Certificate III in Drilling - Blast Hole

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This unit covers the three sub-sectors of:

- blast hole.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Blast Hole* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures. The sector may work in the mining industry and the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Blast Hole:

- **13 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **2 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records
MNCO1040A	Conduct shotfiring operations
MNCU1048A	Conduct shotfiring
MNMOCC103A	Prepare for blasting
MNMOCC104A	Conduct blasting operations
MNMUGC108A	Maintain magazine
MNMUGC432A	Operate equipment services vehicle underground
MNMUGC441A	Handle and transport explosives
MNQOPS311A	Conduct blast survey
MNQOPS413A	Conduct shotfiring

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling
DRTNHB27A	Conduct air drilling
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Speak clearly and directly • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and

workplace documents like policies, procedures etc.

- Understand equipment characteristics, technical capabilities, limitations and procedures

Technology

- Use technology to monitor and report on work progress
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30803 Certificate III in Drilling - Oil/Gas Off shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Oil/Gas OffShore* reflects the role of employees such as a derrickman who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Oil/Gas Off shore:

- **21 or more units :**

- **16 Common units**

- Common (refer to the unit list at the end of this section)*

- **and 4 Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
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
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
DRTOG12B	Perform rig floor operations
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

ELECTIVE UNITS

Other Electives

Code	Title
DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations

Sector Units

Code	Title
DRTOGOF05B	Carry out deck operations
DRTOGOF06B	Handle and store cargo
DRTOGOF09B	Contribute to the control of offshore emergencies
DRTOGOF20B	Monitor, operate and maintain mud pits and equipment
DRTOGOF21B	Operate drilling fluids and mud pits

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly

	<ul style="list-style-type: none"> • Listen carefully to instructions and information • Read and interpret work instructions and safety signs • Calculate basic weights, distances and volumes • Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none"> • Apply teamwork in a range of situations, particularly in a safety context • Contribute to the planning and execution of operations • Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT30903 Certificate III in Drilling - Oil/Gas On shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Oil/Gas - On Shore* reflects the role of employees such as a derrickman who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Requirements

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Oil/Gas On shore:

- **23 or more units :**
 - **16 Common units**
Common (refer to the unit list at the end of this section)
 - **and 7 Sector units**
Sector Units (refer to the unit list at the end of this section)

CORE UNITS

Common

Code	Title
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
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
DRTOG12B	Perform rig floor operations
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

ELECTIVE UNITS

Sector Units

Code	Title
DRTOGON06B	Carry out rig lease operations
DRTOGON07B	Move loads
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

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork	<ul style="list-style-type: none">• Apply teamwork in a range of situations, particularly in a safety context• Contribute to the planning and execution of operations• Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none">• Adjust work methods in response to changing weather and site conditions• Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none">• Independently adapt to changing work conditions or different work areas• Identify potential improvements to working practice and conditions• Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none">• Manage time and priorities to complete work• Identify and obtain appropriate equipment and permits• Identify potential hazards and prepare appropriate responses• Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none">• Take responsibility for planning and organising own work priorities and completing assigned tasks• Monitor own performance to ensure work will be completed well and on time• Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none">• Use technology to monitor and report on work progress• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT31003 Certificate III in Drilling - Seismic

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Seismic* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Seismic:

- **12 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Speak clearly and directly
- Listen carefully to instructions and information
- Read and interpret work instructions and safety signs
- Calculate basic weights, distances and volumes
- Complete incident and maintenance reports

Teamwork

- Apply teamwork in a range of situations, particularly in a safety context
- Contribute to the planning and execution of operations
- Work cooperatively with people of different ages, gender, race, religion or political persuasion

Problem solving	<ul style="list-style-type: none"> • Adjust work methods in response to changing weather and site conditions • Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none"> • Independently adapt to changing work conditions or different work areas • Identify potential improvements to working practice and conditions • Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none"> • Manage time and priorities to complete work • Identify and obtain appropriate equipment and permits • Identify potential hazards and prepare appropriate responses • Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none"> • Take responsibility for planning and organising own work priorities and completing assigned tasks • Monitor own performance to ensure work will be completed well and on time • Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none"> • Use technology to monitor and report on work progress • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT31103 Certificate III in Drilling - Water Well

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the alignment of the qualifications with the licensing requirements.

Characteristics of the qualification

Descriptor

The *Certificate III in Drilling - Water Well* reflects the role of employees such as drillers who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate III in Drilling - Water Well:

- **13 or more units :**
 - **10 Common units**
Common (refer to the unit list at the end of this section)
 - **and Minimum of 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - **and/or 2 units from:**
 - DRTNHB17A Assist cable tool drilling
 - DRTNHB38A Conduct cable tool drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG304A	Maintain business records
DRTNHB24A	Construct monitoring bores

Sector Units

Code	Title
DRTNHB25A	Construct single aquifer production bores
DRTNHB26A	Construct multiple aquifer production bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB17A	Assist cable tool drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB36A	Conduct mud rotary drilling
DRTNHB38A	Conduct cable tool drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none">• Speak clearly and directly• Listen carefully to instructions and information• Read and interpret work instructions and safety signs• Calculate basic weights, distances and volumes• Complete incident and maintenance reports
Teamwork	<ul style="list-style-type: none">• Apply teamwork in a range of situations, particularly in a safety context• Contribute to the planning and execution of operations• Work cooperatively with people of different ages, gender, race, religion or political persuasion
Problem solving	<ul style="list-style-type: none">• Adjust work methods in response to changing weather and site conditions• Participate in team solutions to safety issues
Initiative and enterprise	<ul style="list-style-type: none">• Independently adapt to changing work conditions or different work areas• Identify potential improvements to working practice and conditions• Identify and assess risks in the workplace
Planning and organising	<ul style="list-style-type: none">• Manage time and priorities to complete work• Identify and obtain appropriate equipment and permits• Identify potential hazards and prepare appropriate responses• Follow procedures and techniques relevant to the equipment and work being done
Self management	<ul style="list-style-type: none">• Take responsibility for planning and organising own work priorities and completing assigned tasks• Monitor own performance to ensure work will be completed well and on time• Understand the standard of work expected at a work site
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures
Technology	<ul style="list-style-type: none">• Use technology to monitor and report on work progress• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Operate equipment safely

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40103 Certificate IV in Drilling - Environmental

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Environmental* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Environmental:

- **16 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Sector Units

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising	<ul style="list-style-type: none">• Manage and coordinate time and priorities for self and team• Identify and obtain appropriate personnel and resources for work• Ensure that risks are assessed and appropriate emergency plans are in place• Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Participate in, and where appropriate, lead change processes• Work with staff to create learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40203 Certificate IV in Drilling - Foundation/Construction

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the need to work in with the construction industry and their relevant Training Packages.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Foundation/Construction* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems. The foundation sector drills holes for the building and civil construction industry.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Foundation/Construction:

- **17 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and 2 Sector units**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB10A Assist large diameter auger drilling
 - DRTNHB29A Conduct large diameter auger drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Sector Units

Code	Title
BCCCM2003B	Read and interpret plans and specifications
BCCRC2008B	Lay pipes

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB10A	Assist large diameter auger drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB29A	Conduct large diameter auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management

- Take responsibility for ensuring team targets and goals are achieved
- Understand the standard of work expected at the work site
- Proactively manage team performance
- Develop trust and confidence in staff and customers

Learning

- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Participate in, and where appropriate, lead change processes
- Work with staff to create learning and development plans
- Prepare and lead formal or informal training sessions

Technology

- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40303 Certificate IV in Drilling - Geotechnical

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Geotechnical* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Geotechnical:

- **16 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
 - Note: Relevant unit of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Sector Units

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Participate in, and where appropriate, lead change processes • Work with staff to create learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40403 Certificate IV in Drilling - Trenchless Technology

Rationale :

This is a new qualification.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Trenchless Technology* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Trenchless Technology:

- **14 or more units :**

- **13 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following method units:**

- **Method Units**

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information

- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management

- Take responsibility for ensuring team targets and goals are achieved
- Understand the standard of work expected at the work site
- Proactively manage team performance
- Develop trust and confidence in staff and customers

Learning

- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Participate in, and where appropriate, lead change processes
- Work with staff to create learning and development plans
- Prepare and lead formal or informal training sessions

Technology

- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40503 Certificate IV in Drilling - Mineral Exploration

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Mineral Exploration* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Mineral Exploration:

- **15 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
DRTOG30C	Carry out well control and blowout prevention
DRTOG57A	Apply effective coal seam gas control practices
DRTOG58A	Apply blow out prevention operational procedures
DRTOGOF21B	Operate drilling fluids and mud pits
MNMMNI401A	Administer shotfiring activities
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for

	work
	<ul style="list-style-type: none"> • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Participate in, and where appropriate, lead change processes • Work with staff to create learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40603 Certificate IV in Drilling - Mineral Production and Development

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the need to work in with the mining industry and their relevant Training Packages.

This qualification covers the sub-sectors of:

- raiseboring
- underground.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Mineral Production and Development* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems. The sector works in the mining industry and so the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Mineral Production and Development:

- **17 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **3 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB16A Assist raiseboring
 - DRTNHB37A Conduct raiseboring
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Surface

Code	Title
BSBRKG304A	Maintain business records
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
BSBRKG304A	Maintain business records
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB16A	Assist raiseboring
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling
DRTNHB27A	Conduct air drilling
DRTNHB37A	Conduct raiseboring
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations

	against performance indicators and project milestones
Initiative and enterprise	<ul style="list-style-type: none"> • Act independently to identify potential improvements to working practice and conditions • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Participate in, and where appropriate, lead change processes • Work with staff to create learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40703 Certificate IV in Drilling - Blast Hole

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the need to work in with the mining industry and their relevant Training Packages.

This qualification covers the sub-sectors of:

- blast hole.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling -Blast Hole* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems. The sector may work in the mining industry and so the relevant Mining Training Package (MNC98 Black Coal, MNQ98 Extractive Industry or MNM99 Metalliferous Mining) may need to be consulted in some circumstances.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Blast Hole:

- **16 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **2 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant competency units may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
BSBRKG403A	Set up a business or records system for a small office
BSBSBM402A	Undertake financial planning
BSBSBM403A	Promote the business
BSBSBM404A	Undertake business planning
BSBSBM405A	Monitor and manage business operations
BSBSBM406A	Manage finances
BSBSBM407A	Manage a small team
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
BSBRKG304A	Maintain business records
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling
DRTNHB27A	Conduct air drilling
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise	<ul style="list-style-type: none">• Act independently to identify potential improvements to working practice and conditions• Identify and take steps to resolve risks in the workplace.• Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none">• Manage and coordinate time and priorities for self and team• Identify and obtain appropriate personnel and resources for work• Ensure that risks are assessed and appropriate emergency plans are in place• Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Participate in, and where appropriate, lead change processes• Work with staff to create learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40803 Certificate IV in Drilling - Oil/Gas Off shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Oil/Gas Off Shore* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Oil/Gas Off shore:

- **33 or more units :**

- **27 Common units**

- Common (refer to the unit list at the end of this section)*

- **and 5 Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB41A	Manage non-routine, complex technical situations
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
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
DRTOG12B	Perform rig floor operations
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
DRTOG25B	Maintain standard procedures and safe working practices
DRTOG26B	Rig up
DRTOG28B	Conduct drilling operations
DRTOG29B	Perform drilling calculations and reporting
DRTOG30C	Carry out well control and blowout prevention
DRTOG32B	Participate in nippling-up and pressure test
DRTOG33B	Maintain drilling rig communications systems
DRTOG34B	Manage equipment maintenance
DRTOG35B	Maintain man management systems
DRTOG37B	Participate in, lead and facilitate work teams

ELECTIVE UNITS

Other Electives

Code	Title
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills

Sector Units

Code	Title
DRTOG27B	Conduct pre-spud operations
DRTOGOF05B	Carry out deck operations
DRTOGOF06B	Handle and store cargo
DRTOGOF09B	Contribute to the control of offshore emergencies
DRTOGOF20B	Monitor, operate and maintain mud pits and equipment
DRTOGOF21B	Operate drilling fluids and mud pits

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work

	<ul style="list-style-type: none"> • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Participate in, and where appropriate, lead change processes • Work with staff to create learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT40903 Certificate IV in Drilling - Oil/Gas On shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the merging of some common units between on shore and off shore

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Oil/Gas On Shore* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Oil/Gas On shore:

- **36 or more units :**

- **27 Common units**

- Common (refer to the unit list at the end of this section)*

- **and 9 Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB41A	Manage non-routine, complex technical situations
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
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
DRTOG12B	Perform rig floor operations
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
DRTOG25B	Maintain standard procedures and safe working practices
DRTOG26B	Rig up
DRTOG28B	Conduct drilling operations
DRTOG29B	Perform drilling calculations and reporting
DRTOG30C	Carry out well control and blowout prevention
DRTOG32B	Participate in nippling-up and pressure test
DRTOG33B	Maintain drilling rig communications systems
DRTOG34B	Manage equipment maintenance
DRTOG35B	Maintain man management systems
DRTOG37B	Participate in, lead and facilitate work teams

ELECTIVE UNITS

Other Electives

Code	Title
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills

Sector Units

Code	Title
DRTOG31B	Shut down rig
DRTOG36B	Coordinate air drilling operations
DRTOGON06B	Carry out rig lease operations
DRTOGON07B	Move loads
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

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising	<ul style="list-style-type: none">• Manage and coordinate time and priorities for self and team• Identify and obtain appropriate personnel and resources for work• Ensure that risks are assessed and appropriate emergency plans are in place• Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Participate in, and where appropriate, lead change processes• Work with staff to create learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT41003 Certificate IV in Drilling - Seismic

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Seismic* reflects the role of employees such as Senior Drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Competency is required in **15** units:

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Seismic:

- **15 or more units :**

- **13 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Pairs of method units:**

- **2 units from:**

- DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling

- **and/or 2 units from:**

- DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information

- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management

- Take responsibility for ensuring team targets and goals are achieved
- Understand the standard of work expected at the work site
- Proactively manage team performance
- Develop trust and confidence in staff and customers

Learning

- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Participate in, and where appropriate, lead change processes
- Work with staff to create learning and development plans
- Prepare and lead formal or informal training sessions

Technology

- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT41103 Certificate IV in Drilling - Water Well

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- additional units created for Certificate IV
- the alignment of the qualifications with the licensing requirements.

Characteristics of the qualification

Descriptor

The *Certificate IV in Drilling - Water Well* reflects the role of employees such as senior drillers. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Certificate IV in Drilling - Water Well:

- **16 or more units :**
 - **13 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 or more Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - **and/or 2 units from:**
 - DRTNHB17A Assist cable tool drilling
 - DRTNHB38A Conduct cable tool drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: When packaging units for this qualification, the combination of the assessment units BSZ401A Plan assessment, BSZ402A Conduct assessment and BSZ403A Review assessment count as one unit only.
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations

ELECTIVE UNITS

Other Electives

Code	Title
TAAASS401A	Plan and organise assessment
TAAASS402A	Assess competence
TAAASS404A	Participate in assessment validation
TAADEL301A	Provide training through instruction and demonstration of work skills
TAADEL404A	Facilitate work-based learning

Sector Units

Code	Title
DRTNHB25A	Construct single aquifer production bores
DRTNHB26A	Construct multiple aquifer production bores
DRTNHB44A	Construct artesian (flowing) aquifer production bores
DRTNHB45A	Construct geothermal wells

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB17A	Assist cable tool drilling

Code	Title
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB36A	Conduct mud rotary drilling
DRTNHB38A	Conduct cable tool drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Participate in site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Work with staff to solve problems and coordinate team member's responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Participate in ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Participate in, and where appropriate, lead change processes• Work with staff to create learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50103 Diploma of Drilling - Environmental

Rationale :

This qualification has been changed to reflect:

- additional units created for Certificate IV.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Environmental* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Environmental:

- **20 units**
 - **17 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49A	Plan drilling
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Sector Units

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

**Employability Skill
Communication**

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising	<ul style="list-style-type: none">• Manage and coordinate time and priorities for self and team• Identify and obtain appropriate personnel and resources for work• Ensure that risks are assessed and appropriate emergency plans are in place• Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Lead change and continuous improvement processes• Manage learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50203 Diploma of Drilling - Foundation/Construction

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the construction industry and their relevant Training Packages.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Foundation/Construction* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills. The foundation sector drills holes for the building and civil construction industry.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Foundation/Construction:

- 21 or more units :

- 17 Common units

Common (refer to the unit list at the end of this section)

- and 2 Sector units

Sector Units (refer to the unit list at the end of this section)

- and Minimum of 1 of the following Pairs of method units:

- 2 units from:

- DRTNHB09A Assist continuous flight auger drilling
- DRTNHB28A Conduct continuous flight auger drilling

- or 2 units from:

- DRTNHB10A Assist large diameter auger drilling
- DRTNHB29A Conduct large diameter auger drilling

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- Other Electives

Other Electives (refer to the unit list at the end of this section)

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Sector Units

Code	Title
BCCCM2003B	Read and interpret plans and specifications
BCCRC2008B	Lay pipes

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB10A	Assist large diameter auger drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB29A	Conduct large diameter auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Lead change and continuous improvement processes• Manage learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50303 Diploma of Drilling - Geotechnical

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Geotechnical* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Geotechnical:

- **20 or more units :**
 - **17 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 Sector unit**
Sector Unit (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling
 - **and/or 2 units from:**
 - DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Sector Unit

Code	Title
DRTNHB24A	Construct monitoring bores

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

**Employability Skill
Communication**

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising	<ul style="list-style-type: none">• Manage and coordinate time and priorities for self and team• Identify and obtain appropriate personnel and resources for work• Ensure that risks are assessed and appropriate emergency plans are in place• Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none">• Take responsibility for ensuring team targets and goals are achieved• Understand the standard of work expected at the work site• Proactively manage team performance• Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none">• Be willing to learn new ways of working• Seek information to improve performance from people and workplace documents like policies, procedures etc.• Understand equipment characteristics, technical capabilities, limitations and procedures• Lead change and continuous improvement processes• Manage learning and development plans• Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none">• Apply a range of basic IT skills in monitoring and reporting on systems• Operate Equipment safely and according to manufacturer and workplace guidelines• Use communications technology appropriate to the workplace (email, mobile, radio, etc)• Computer technology is used to monitor and communicate project status• Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50403 Diploma of Drilling - Trenchless Technology

Rationale :

This is a new qualification.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Trenchless Technology* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Trenchless Technology:

- **18 or more units :**

- **17 Common Units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following method units:**

- **Method Units**

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information

- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for work
- Ensure that risks are assessed and appropriate emergency plans are in place
- Ensure that project planning incorporates the possibility of adapting to future changes

Self management

- Take responsibility for ensuring team targets and goals are achieved
- Understand the standard of work expected at the work site
- Proactively manage team performance
- Develop trust and confidence in staff and customers

Learning

- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Lead change and continuous improvement processes
- Manage learning and development plans
- Prepare and lead formal or informal training sessions

Technology

- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50503 Diploma of Drilling - Mineral Exploration

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Mineral Exploration* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Mineral Exploration:

- **19 or more units :**

- **17 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Pairs of method units:**

- **2 units from:**

- DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling

- **and/or 2 units from:**

- DRTNHB11A Assist conventional core drilling
 - DRTNHB30A Conduct conventional core drilling

- **and/or 2 units from:**

- DRTNHB12A Assist wireline core drilling
 - DRTNHB31A Conduct wireline core drilling

- **and/or 2 units from:**

- DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff
DRTOG30C	Carry out well control and blowout prevention
DRTOG57A	Apply effective coal seam gas control practices
DRTOG58A	Apply blow out prevention operational procedures
DRTOGOF21B	Operate drilling fluids and mud pits
DRTOGON24B	Operate mud systems

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB11A	Assist conventional core drilling
DRTNHB12A	Assist wireline core drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB27A	Conduct air drilling
DRTNHB30A	Conduct conventional core drilling
DRTNHB31A	Conduct wireline core drilling
DRTNHB36A	Conduct mud rotary drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for

	<p>work</p> <ul style="list-style-type: none"> • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50603 Diploma of Drilling - Mineral Production and Development

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This qualification covers the sub-sectors of:

- raiseboring
- underground.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Mineral Production and Development* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Mineral Production and Development:

- **21 or more units :**
 - **17 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **3 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB16A Assist raiseboring
 - DRTNHB37A Conduct raiseboring
 - Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
 - Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Surface

Code	Title
BSBRKG304A	Maintain business records
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
BSBRKG304A	Maintain business records
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB16A	Assist raiseboring
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling
DRTNHB27A	Conduct air drilling
DRTNHB37A	Conduct raiseboring
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations

against performance indicators and project milestones

Initiative and enterprise	<ul style="list-style-type: none"> • Act independently to identify potential improvements to working practice and conditions • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50703 Diploma of Drilling - Blast Hole

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the need to work in with the mining industry and their relevant Training Packages.

This qualification covers the sub-sectors of:

- blast hole.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Blast Hole* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Blast Hole:

- **20 or more units :**
 - **17 Common units**
Common (refer to the unit list at the end of this section)
 - **and All relevant sector units for either surface OR underground:**
 - **2 Surface units**
Surface (refer to the unit list at the end of this section)
 - **or 4 Underground units**
Underground (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB18A Assist down hole hammer drilling
 - DRTNHB39A Conduct down hole hammer drilling
 - **and/or 2 units from:**
 - DRTNHB19A Assist top hole hammer drilling
 - DRTNHB40A Conduct top hole hammer drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Surface

Code	Title
MNMOCC1418A	Transport plant, equipment and personnel
MNMOCC426A	Operate light vehicle

Underground

Code	Title
DRTNHB02A	Follow underground health and safety procedures
MNMUGC1101A	Set up and prepare for ground support
MNMUGC434A	Transport plant, equipment and personnel

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB18A	Assist down hole hammer drilling
DRTNHB19A	Assist top hole hammer drilling
DRTNHB27A	Conduct air drilling
DRTNHB39A	Conduct down hole hammer drilling
DRTNHB40A	Conduct top hole hammer drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions

	<ul style="list-style-type: none"> • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50803 Diploma of Drilling - Oil/Gas Off shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Oil/Gas Off Shore* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Oil/Gas Off shore:

- **37 or more units :**

- **30 common units**

- Common (refer to the unit list at the end of this section)*

- **and 6 Sector units**

- Sector Units (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB41A	Manage non-routine, complex technical situations
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
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
DRTOG12B	Perform rig floor operations
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
DRTOG25B	Maintain standard procedures and safe working practices
DRTOG26B	Rig up
DRTOG28B	Conduct drilling operations
DRTOG29B	Perform drilling calculations and reporting
DRTOG30C	Carry out well control and blowout prevention
DRTOG32B	Participate in nippling-up and pressure test
DRTOG33B	Maintain drilling rig communications systems
DRTOG34B	Manage equipment maintenance
DRTOG35B	Maintain man management systems
DRTOG37B	Participate in, lead and facilitate work teams
DRTOG38B	Manage rig operations
DRTOG39B	Plan and evaluate rig operations
DRTOG42B	Manage drilling induction and orientation

ELECTIVE UNITS

Other Electives

Code	Title
DRTOGOF07B	Assist in the transfer of passengers and freight during helicopter operations

Sector Units

Code	Title
DRTOG27B	Conduct pre-spud operations
DRTOG40B	Oversee drilling operations
DRTOGOF05B	Carry out deck operations
DRTOGOF06B	Handle and store cargo
DRTOGOF09B	Contribute to the control of offshore emergencies
DRTOGOF20B	Monitor, operate and maintain mud pits and equipment
DRTOGOF21B	Operate drilling fluids and mud pits

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team
- Identify and obtain appropriate personnel and resources for

	work
	<ul style="list-style-type: none"> • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT50903 Diploma of Drilling - Oil/Gas On shore

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the merging of some common units between on shore and off shore.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Oil/Gas On Shore* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Oil/Gas On shore:

- **44 or more units :**
 - **30 Common units**
Common (refer to the unit list at the end of this section)
 - **and 13 Sector units**
Sector Units (refer to the unit list at the end of this section)
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB41A	Manage non-routine, complex technical situations
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
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
DRTOG12B	Perform rig floor operations
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
DRTOG25B	Maintain standard procedures and safe working practices
DRTOG26B	Rig up
DRTOG28B	Conduct drilling operations
DRTOG29B	Perform drilling calculations and reporting
DRTOG30C	Carry out well control and blowout prevention
DRTOG32B	Participate in nippling-up and pressure test
DRTOG33B	Maintain drilling rig communications systems
DRTOG34B	Manage equipment maintenance
DRTOG35B	Maintain man management systems
DRTOG37B	Participate in, lead and facilitate work teams
DRTOG38B	Manage rig operations
DRTOG39B	Plan and evaluate rig operations
DRTOG42B	Manage drilling induction and orientation

ELECTIVE UNITS

Sector Units

Code	Title
DRTOG31B	Shut down rig
DRTOG36B	Coordinate air drilling operations
DRTOG41B	Manage drilling operations
DRTOG43B	Manage rig move and camp move
DRTOG44B	Manage and monitor rig-up and rig-up to spud operations
DRTOG45B	Manage well completion and abandonment
DRTOGON06B	Carry out rig lease operations
DRTOGON07B	Move loads
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

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues

	<ul style="list-style-type: none"> • Manage the ongoing review and adjustment of operations against performance indicators and project milestones
Initiative and enterprise	<ul style="list-style-type: none"> • Act independently to identify potential improvements to working practice and conditions • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT51003 Diploma of Drilling - Seismic

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Seismic* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Seismic:

- **19 or more units :**

- **17 Common units**

- Common (refer to the unit list at the end of this section)*

- **and Minimum of 1 of the following Pairs of method units:**

- **2 units from:**

- DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling

- **and/or 2 units from:**

- DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication	Industry/enterprise requirements for this qualification include: <ul style="list-style-type: none"> • Provide clear and direct feedback • Listen carefully to instructions and information • Read and interpret project plans and safety signs • Calculate basic weights, distances and volumes • Complete accurate work plans, technical reports, risk assessments, etc. • Negotiate solutions to customer and workplace based issues • Negotiate project details with clients • Network with other professionals working in the same field
Teamwork	<ul style="list-style-type: none"> • Plan and lead team performance and operations • Coordinate project activities and timelines with clients • Work cooperatively with people of different ages, gender, race, religion or political persuasion • Provide feedback and advice to staff • Lead site-wide planning and coordination activities
Problem solving	<ul style="list-style-type: none"> • Re-allocate staff and resources in response to changing weather, site conditions and priorities • Manage staff to solve problems and coordinate individual responsibilities and activities • Work cooperatively with clients to resolve contract and operational issues • Manage the ongoing review and adjustment of operations against performance indicators and project milestones
Initiative and enterprise	<ul style="list-style-type: none"> • Act independently to identify potential improvements to working practice and conditions • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working

- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Lead change and continuous improvement processes
- Manage learning and development plans
- Prepare and lead formal or informal training sessions

Technology

- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT51103 Diploma of Drilling - Water Well

Rationale :

This qualification has been changed to reflect:

- the addition of 'method' units of competency
- the alignment of the qualifications with the licensing requirements.

Characteristics of the qualification

Descriptor

The *Diploma of Drilling - Water Well* reflects the role of a supervisor in a drilling operation. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Diploma of Drilling - Water Well:

- **20 or more units :**
 - **17 Common units**
Common (refer to the unit list at the end of this section)
 - **and 1 or more Sector unit**
Sector Units (refer to the unit list at the end of this section)
 - **and Minimum of 1 of the following Pairs of method units:**
 - **2 units from:**
 - DRTNHB08A Assist air drilling
 - DRTNHB27A Conduct air drilling
 - **and/or 2 units from:**
 - DRTNHB09A Assist continuous flight auger drilling
 - DRTNHB28A Conduct continuous flight auger drilling
 - **and/or 2 units from:**
 - DRTNHB15A Assist mud rotary drilling
 - DRTNHB36A Conduct mud rotary drilling
 - **and/or 2 units from:**
 - DRTNHB17A Assist cable tool drilling
 - DRTNHB38A Conduct cable tool drilling
- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from the method units above or from:
 - **Other Electives**
Other Electives (refer to the unit list at the end of this section)
- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB01A	Follow workplace health, safety and environment procedures
DRTNHB03A	Work effectively in the drilling industry
DRTNHB04A	Work in a drilling team
DRTNHB05A	Mobilise equipment and materials
DRTNHB06A	Set up/pack up drill site
DRTNHB07A	Support drilling process
DRTNHB20A	Set up and prepare for drilling operations
DRTNHB21A	Run on-site operations
DRTNHB22A	Carry out operational maintenance
DRTNHB23A	Carry out informal on the job training
DRTNHB41A	Manage non-routine, complex technical situations
DRTNHB42A	Manage mobilisation of equipment and materials
DRTNHB43A	Manage on-site operations
DRTNHB46A	Maintain effective team/crew operations
DRTNHB47A	Manage equipment maintenance
DRTNHB48A	Manage financial resources
DRTNHB49B	Plan drilling

ELECTIVE UNITS

Other Electives

Code	Title
BSBFLM501A	Manage personal work priorities and professional development
BSBFLM502A	Provide leadership in the workplace
BSBFLM503A	Establish effective workplace relationships
BSBFLM504A	Facilitate work teams
BSBMGT503A	Prepare budgets and financial plans
BSBMGT504A	Manage budgets and financial plans
BSBMGT505A	Ensure a safe workplace
BSBMGT506A	Recruit, select and induct staff

Sector Units

Code	Title
DRTNHB25A	Construct single aquifer production bores
DRTNHB26A	Construct multiple aquifer production bores
DRTNHB44A	Construct artesian (flowing) aquifer production bores
DRTNHB45A	Construct geothermal wells

Elective Units referenced in the Packaging Rules

Code	Title
DRTNHB08A	Assist air drilling
DRTNHB09A	Assist continuous flight auger drilling
DRTNHB15A	Assist mud rotary drilling
DRTNHB17A	Assist cable tool drilling
DRTNHB27A	Conduct air drilling
DRTNHB28A	Conduct continuous flight auger drilling
DRTNHB36A	Conduct mud rotary drilling
DRTNHB38A	Conduct cable tool drilling

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual responsibilities and activities
- Work cooperatively with clients to resolve contract and operational issues
- Manage the ongoing review and adjustment of operations against performance indicators and project milestones

Initiative and enterprise

- Act independently to identify potential improvements to working practice and conditions
- Identify and take steps to resolve risks in the workplace.
- Encourage the exploration and application of innovative approaches to improve on operational performance

Planning and organising

- Manage and coordinate time and priorities for self and team

	<ul style="list-style-type: none"> • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

DRT60103 Advanced Diploma of Drilling Management

Rationale :

The requirements for the Advanced Diploma have remained unchanged from the previous Training Package (DRT98). These requirements are the same across all sectors of the drilling industry.

Characteristics of the qualification

Descriptor

The Advanced Diploma of Drilling Management reflects the role of managers who perform tasks that are broad, specialised, complex and technical, and include strategic areas and initiating activities. They are required to demonstrate self-directed application of theoretical and technical knowledge and initiate solutions to technical problems or management requirements.

Qualification Requirements

Note - The following qualification details may be a duplicate of the information above due to the current method of coding packaging rules for the latest release of NTIS (National Training Information Service).

To achieve a Advanced Diploma of Drilling Management:

- **6 or more units :**

- **6 Common units**

- Common (refer to the unit list at the end of this section)*

- Note: 1 or more of the following electives may also be appropriate. Where it is required by company or site conditions for a person to complete units in addition to the units required to achieve a qualification, separate statements of attainment may be issued. These units may be selected from:

- **Other Electives**

- Other Electives (refer to the unit list at the end of this section)*

- Note: Relevant units of competency may be imported from another Training Package to add to, or where appropriate replace, 'elective' units. Electives may also be chosen from other streams and other levels.

CORE UNITS

Common

Code	Title
DRTNHB50A	Manage business operations
DRTNHB51A	Manage human resources
DRTNHB52A	Manage client services
DRTNHB53A	Manage non-routine, complex situations
DRTOG52B	Implement and maintain statutory/legal compliance system
DRTOG53B	Implement and maintain occupational health and safety/environmental site risk management processes

ELECTIVE UNITS

Other Electives

Code	Title
BSBMGT603A	Review and develop business plans
BSBMGT604A	Manage business operations
DRTOG54B	Manage multiple drilling operations

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

Employability Skill Communication

Industry/enterprise requirements for this qualification include:

- Provide clear and direct feedback
- Listen carefully to instructions and information
- Read and interpret project plans and safety signs
- Calculate basic weights, distances and volumes
- Complete accurate work plans, technical reports, risk assessments, etc.
- Negotiate solutions to customer and workplace based issues
- Negotiate project details with clients
- Network with other professionals working in the same field

Teamwork

- Plan and lead team performance and operations
- Coordinate project activities and timelines with clients
- Work cooperatively with people of different ages, gender, race, religion or political persuasion
- Provide feedback and advice to staff
- Lead site-wide planning and coordination activities

Problem solving

- Re-allocate staff and resources in response to changing weather, site conditions and priorities
- Manage staff to solve problems and coordinate individual

	<ul style="list-style-type: none"> responsibilities and activities • Work cooperatively with clients to resolve contract and operational issues • Manage the ongoing review and adjustment of operations against performance indicators and project milestones
Initiative and enterprise	<ul style="list-style-type: none"> • Act independently to identify potential improvements to working practice and conditions • Identify and take steps to resolve risks in the workplace. • Encourage the exploration and application of innovative approaches to improve on operational performance
Planning and organising	<ul style="list-style-type: none"> • Manage and coordinate time and priorities for self and team • Identify and obtain appropriate personnel and resources for work • Ensure that risks are assessed and appropriate emergency plans are in place • Ensure that project planning incorporates the possibility of adapting to future changes
Self management	<ul style="list-style-type: none"> • Take responsibility for ensuring team targets and goals are achieved • Understand the standard of work expected at the work site • Proactively manage team performance • Develop trust and confidence in staff and customers
Learning	<ul style="list-style-type: none"> • Be willing to learn new ways of working • Seek information to improve performance from people and workplace documents like policies, procedures etc. • Understand equipment characteristics, technical capabilities, limitations and procedures • Lead change and continuous improvement processes • Manage learning and development plans • Prepare and lead formal or informal training sessions
Technology	<ul style="list-style-type: none"> • Apply a range of basic IT skills in monitoring and reporting on systems • Operate Equipment safely and according to manufacturer and workplace guidelines • Use communications technology appropriate to the workplace (email, mobile, radio, etc) • Computer technology is used to monitor and communicate project status • Use IT to create documents and maintain records of work activities

This table is a summary of employability skills that are typical of this qualification and should not be interpreted as definitive.

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 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

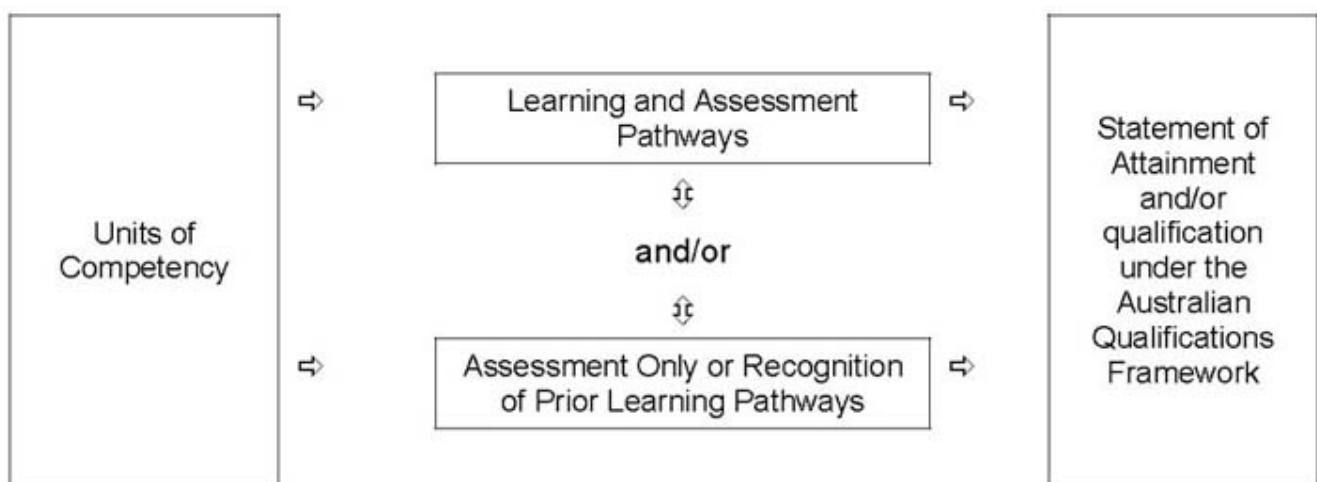
Individuals being assessed under statutory licensing and industry registration systems must comply with training and experience requirements additional to the minimum requirements identified in this Training Package.

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	a	The RTO must ensure that assessments are conducted by a person who has:
		<ul style="list-style-type: none">the following competencies* from the Training Package for Assessment and Workplace Training, or demonstrated equivalent competencies:<ul style="list-style-type: none">TAAASS401A Plan and organise assessment;TAAASS402A Assess competence;TAAASS404A Participate in assessment validation;relevant vocational competencies, at least to the level being assessed.
	b	However, if a person does not have all of the competencies in Standards 7.3 a (i) and the vocational competencies as defined in 7.3 a (ii), one person with the competencies listed in Standard 7.3 a (i), and one or more persons who have the competencies listed in Standard 7.3 a (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

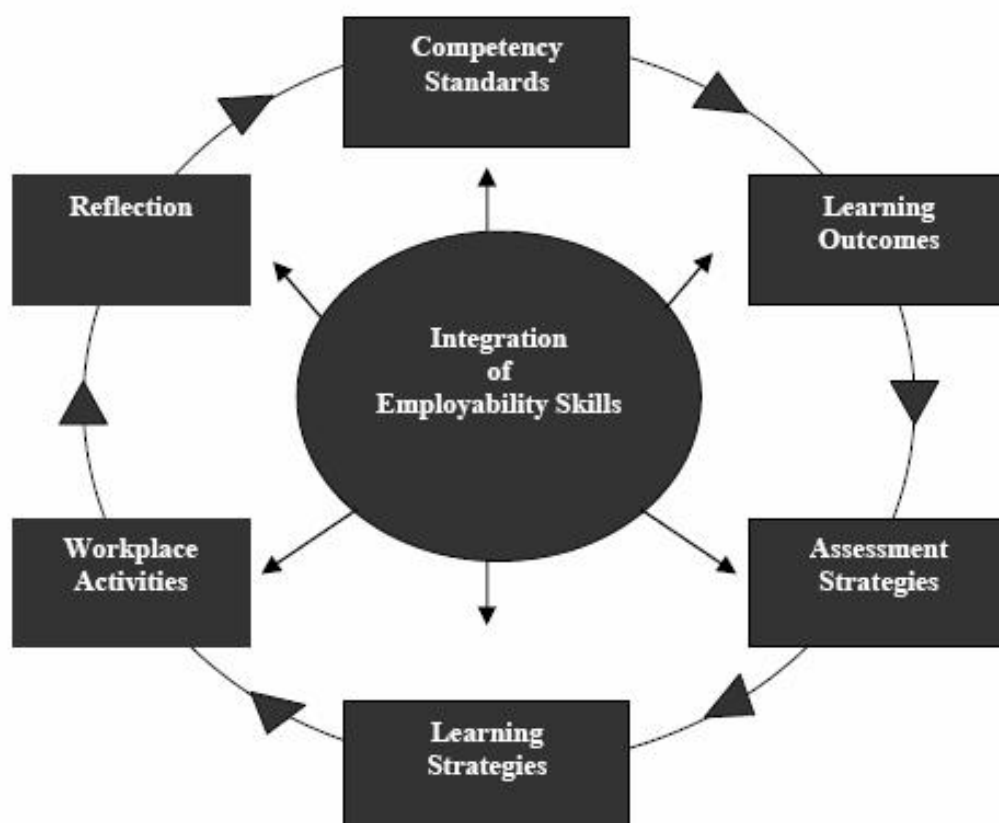
Assessments must meet the criteria set out in Standard 8 from the *Standards for Registered Training Organisations*. For information, Standard 8 from the *Standards for Registered Training Organisations* is reproduced below.

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 assesseees 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

Email: 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

email: 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

Email: 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

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

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

Australian Quality Training Framework (AQTF) - for resources and information go to:
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

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 *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

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. Go to 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

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.

Competency Standards

What is competency?

The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.

Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and, dealing with the responsibilities of the workplace, including working with others. Workplace competency requires the ability to apply relevant skills, knowledge and attitudes consistently over time and in the required workplace situations and environments. In line with this concept of competency Training Packages focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself.

Competency standards in Training Packages are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of units of competency each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.

Contextualisation of Units of Competency by RTOs

Registered Training Organisation (RTOs) may contextualise units of competency to reflect local outcomes required. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. However, the integrity of the overall intended outcome of the unit of competency must be maintained.

Any contextualisation of units of competency in this endorsed Training Package must be within the bounds of the following advice. In contextualising units of competency, RTOs:

- must not remove or add to the number and content of elements and performance criteria
- may add specific industry terminology to performance criteria where this does not distort or narrow the competency outcomes
- may make amendments and additions to the range statement as long as such changes do not diminish the breadth of application of the competency and reduce its portability, and/or
- may add detail to the evidence guide in areas such as the critical aspects of evidence or resources and infrastructure required where these expand the breadth of the competency but do not limit its use.

Components of Units of Competency

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

Unit Title

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

Unit Descriptor

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of

competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

Employability Skills statement

A standard Employability Skills statement appears in each unit of competency. This statement directs trainers and assessors to consider the information contained in the Employability Skills Summary in which the unit of competency is packaged.

Prerequisite Units (optional)

If there are any units of competency that must be completed before the unit, these will be listed.

Application of the Unit

This sub-section fleshes out the unit of competency's scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

Competency Field (Optional)

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

Sector (optional)

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.

Elements of Competency

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

Performance Criteria

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

Required Skills and Knowledge

The essential skills and knowledge are either identified separately or combined. Knowledge identifies what a person needs to know to perform the work in an informed and effective manner. Skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

Range Statement

The range statement provides a context for the unit of competency, describing 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. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.

Evidence Guide

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the

assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment
- relationships with the assessment of any other units of competency
- suitable methodologies for conducting assessment including the potential for workplace simulation
- resource implications, for example access to particular equipment, infrastructure or situations
- how consistency in performance can be assessed over time, various contexts and with a range of evidence, and expectations at the AQF qualification level involved

Employability Skills in units of competency

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.

Employability Skills	Mayer Key Competencies
Communication	Communicating ideas and information
Teamwork	Working with others and in teams
Problem solving	Solving problems Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information Planning and organising activities
Self-management	
Learning	
Technology	Using technology

When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

Explicitly embedding Employability Skills in units of competency

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

The following table contains examples of embedded Employability Skills for each component of a unit of competency. Please note that in the examples below the bracketed skills are provided only for clarification and will not be present in units of competency within this Training Package.

Example Employability Skills unit

Unit component	Example of embedded Employability Skill
Unit Title	Give formal presentations and take part in meetings (communication)
Unit Descriptor	This unit covers the skills and knowledge required to promote the use and implementation of innovative work practices to effect change (initiative and enterprise)
Element	Proactively resolve issues (problem solving)
Performance Criteria	Information is organised in a format suitable for analysis and dissemination in accordance with organisational requirements (planning and organising)
Range Statement	Software applications may include email, internet, word processing, spreadsheet, database or accounting packages (technology)
Required Skills and Knowledge	Modify activities depending on differing workplace contexts, risk situations and environments (learning) Work collaboratively with others during a fire emergency (teamwork) Instructions, procedures and other information relevant the maintenance of vessel and port security (communication)

Evidence Guide	<p>Evidence of having worked constructively with a wide range of community groups and stakeholders to solve problems and adapt or design new solutions to meet identified needs in crime prevention. In particular, evidence must be obtained on the ability to:</p> <ul style="list-style-type: none">• assess response options to identified crime-prevention needs and determine the optimal action to be implemented• in consultation with relevant others, design an initiative to address identified issues (initiative and enterprise).
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Competency Standards - Industry Contextualisation

Incorporating Employability Skills into learning and assessment strategies

Employability Skills are an integral part of competency. Units of competency have been developed to ensure relevant Employability Skills facets have been embedded within competency components rather than 'bolted on'. This approach more accurately describes Employability Skills within the context of work outcomes.

Trainers and assessors are required to analyse and 'unpack' each unit of competency to develop learning and assessment strategies that include the application of Employability Skills. This includes implementing learning and assessment strategies that meet learners' needs and reflect industry requirements.

DRT03 Drilling Training Package

Introduction, Qualifications Framework and Assessment Guidelines

Volume 1 of 3