



Australian Government

RIIOGD405D Carry out well control and blow out prevention

Release: 3

RIIOGD405D Carry out well control and blow out prevention

Modification History

Release	Comment
1	This unit replaces RIIOGD405A Carry out well control and blow out prevention
2	Performance Criteria amended to make requirements more explicit.
3	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to apply carry out well control and blow out prevention in Coal mining and Drilling.

This unit is appropriate for those working in supervisory roles.

No licensing, legislation or certification requirements apply to this unit at the time of publication.

Unit Sector

Coal mining

Drilling

Elements and Performance Criteria

1. Plan and prepare to carry out well control and blow out prevention	1.1 Access, interpret and apply well control and blow out prevention documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify, address and report potential hazards, risks and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate to the work activities 1.5 Calculate mud weight, pressure losses, drill stem and annular volumes, maximum allowable annular surface pressure (MAASP) and initial and final circulating pressures
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	1.6 Identify, interpret and respond to the early warning signs of kicks and well going under-balance while drilling 1.7 Recognise kick indicators and apply kick detection methods and responses
2. Assess well control equipment and report and record faults	2.1 Identify the purpose, use and relationship between equipment, indicators, counters and detection systems to determine fitness of equipment for well control. 2.2 Identify flow paths for normal drilling operations and well control 2.3 Identify and apply well-control testing procedures and principles 2.4 Demonstrate primary equipment failure well shut-in procedures
3. Carry out well kill operations	3.1 Brief crew on well control procedures 3.2 Access and apply pre-recorded information 3.3 Identify, read, interpret and record pressures and gauge information and undertake corrective action 3.4 Determine and apply well kill procedures 3.5 Demonstrate correct application of trip kill sheet data and well-closure procedure when dealing with influx and shutting in a well 3.6 Calculate hydrostatic head at specific depths, and apply correct procedure when observing loss of circulation 3.7 Identify, interpret and apply correct tripping methods and tests 3.8 Identify, interpret and apply stripping methods 3.9 Identify, interpret and apply recording and reporting procedures 3.10 Manage and communicate with crew during a well control emergency
4. Conduct housekeeping activities	4.1 Clean, check, maintain and store plant, tools and equipment 4.2 Report issues identified with plant, tools and equipment

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

No equivalent Unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIOGD405D Carry out well control and blow out prevention

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient well control and blow out prevention including:
 - identifying, addressing and reporting potential hazards and risks
 - controlling identified hazards
 - identifying, addressing and reporting environmental issues
 - preparing written records and reports
 - rectifying and/or reporting faults and malfunctions
- works effectively with others to undertake and complete effective well control and blow out prevention that meets all required outcomes including:
 - resolving coordination requirements with others at the site prior to commencing and during work activities
 - preparing for and organising work activities to meet all task requirements
 - using a range of communication techniques and aids to advise others of work activity and exclusion zones
- demonstrates completion of well control and blow out prevention that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - taking measurements such as:

- penetration rate
- circulating and pump pressure
- rotary torque
- active surface volume
- frequency
- making calculations and estimations, including:
 - pressure
 - density
 - volume
 - height
 - velocity
 - length
 - weight
- interpreting gauges, graphs
- detecting kick warning signs and indicators
- completing trip and kill sheet records
- monitoring drilling operations

Knowledge Evidence

The candidate must demonstrate knowledge in applying well control and blow out prevention through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - setting up work activity
 - site isolation, signage and erecting barriers
 - work health and safety
 - selecting and checking for faults, all plant, tools and equipment to carry out tasks
 - carrying out work to specifications
 - standard working practices and procedures
 - correct methods to control identified hazards
 - technical solutions for well control and blow out prevention
 - kick detection methods and responses
 - using well control and auxiliary equipment
 - delegating roles and responsibilities of assistants
 - maintaining equipment
 - taking measurements and making calculations
 - responding to emergency situations

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit is best assessed in the context of this sector's work environment;
- where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry	

	standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.
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*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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