



Australian Government

RIINHB313D Conduct cable tool drilling

Release: 2

RIINHB313D Conduct cable tool drilling

Modification History

Release	Comment
1	This unit replaces RIINHB313A Conduct cable tool drilling
2	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 conduct cable tool drilling in Drilling.

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of this unit

Unit Sector

Drilling

Elements and Performance Criteria

1. Plan and prepare for cable tool drilling	1.1 Access, interpret and apply cable tool drilling documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities Communicate and coordinate activities with others throughout the work activity 1.5 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency
2. Operate cable	2.1 Carry out pre-start and start up procedures

tool drill	2.2 Identify, select and apply rig operational controls 2.3 Identify and use different tool/casing types, thread forms and thread make up parameters 2.4 Select appropriate bits, shoes, clamps, casing, tools and lifting devices for the expected formations 2.5 Use tool handling equipment such as spanners and chain tongs safely 2.6 Assemble tool strings 2.7 Maintain correct tension on the drill line and correct stroke rate during drilling operations 2.8 Bail hole of cuttings as required to maintain satisfactory penetration rates 2.9 Continually monitor hazards and risks , and ensure safety of self, other personnel, plant and equipment 2.10 Measure drill string components and calculate depth of hole 2.11 Select drilling tools to maintain hole straightness 2.12 Drive and jack casing as required 2.13 Select appropriate tools to undertake fishing operations
3. Operate drill fluid system	3.1 Identify hole conditions requiring the use of drilling fluids/chemicals 3.2 Select, prepare, apply, test and monitor suitable fluids and additives 3.3 Adjust fluid level in the hole to maintain hole stability and optimise penetration rates 3.4 Dispose of drill fluids in an environmentally safe manner
4. Recover formation samples	4.1 Select appropriate sampling tools/methods depending on the type of formations being drilled 4.2 Obtain formation water samples as required
5. Respond to problems	5.1 Identify possible problems in equipment or processes 5.2 Determine problems needing action 5.3 Determine possible fault causes 5.4 Rectify problem using appropriate solution within area of responsibility 5.5 Follow through items initiated until final resolution has occurred 5.6 Report problems outside area of responsibility to designated

	person
6. Maintain equipment Complete equipment maintenance and housekeeping	6.1 Carry out shutdown procedures and secure equipment 6.2 Sharpen bits or re-metal rope swivels 6.3 Clean and lubricate rope swivels to ensure correct operation 6.4 Check slings, drill lines and bailing lines for wear and replace as necessary using appropriate wire rope and spooling 6.5 Grease derrick sheaves regularly 6.6 Examine critical rig components such as sheaves and shackles regularly for wear or cracks 6.7 Maintain tool string components 6.8 Adjust clutch play, drive belt and jockey pulley tension as required 6.9 Perform routine maintenance to rig engine 6.10 Ensure housekeeping activities are completed 6.11 Process records

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

RIINHB313A Conduct cable tool drilling

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 RIINHB313D Conduct cable tool drilling

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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 completion of cable tool drilling including:
 - welding
 - oxy-acetylene use
 - conducting routine checks and basic maintenance
 - understanding mud mixing and conditioning
 - identifying and responding to changes in ground conditions
 - conducting sampling
 - reading, interpreting and applying safety data sheets (SDS) for handling hazardous materials
- works effectively with others to undertake and complete the conduct of cable tool drilling that meets all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - communicating clearly and concisely with others to resolve coordination requirements prior to commencing and during work activities
- demonstrates completion of cable tool drilling that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:

- identifying and using different tool/casing types, thread forms and thread make up parameters
- selecting appropriate bits, shoes, clamps, casing, tools and lifting devices for the expected formations
- assembling tool strings
- maintaining correct tension on the drill line and correct stroke rate during drilling operations
- measuring drill string components and calculating depth of hole
- selecting drilling tools to maintain hole straightness
- undertaking fishing/recovery operations

Knowledge Evidence

The candidate must demonstrate knowledge in conducting cable tool drilling through:

- accessing, interpreting and applying the organisation and site requirements and procedures for:
 - work, health and safety
 - environmental issues
 - operating drill rig
 - housekeeping
 - welding to dress bits, casing shoes
 - re-metalling rope sockets
- being prepared for fire/accident/emergency

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 must be assessed in the context of this sector's work environment; 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.	

*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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