Australian Government

RIINHB2XX Assist wireline core drilling

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Release: 1

RIINHB2XX Assist wireline core drilling

Modification History

Release	Comments
1	This unit of competency was first released in RII Resources and Infrastructure Industry Training Package Release 13.0.

Application

This unit describes the skills and knowledge required to assist wireline core drilling. It prepares individuals to support the wireline core drilling process, handle core samples, mix drilling fluids and carry out basic maintenance of tools and equipment.

It applies to those working in assistant driller roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures.

Licensing/Regulatory Information

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

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

N/A

Unit sector(s)

Drilling

Elements and Performance Criteria

Element	**Performance criteria**
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Plan and prepare to assist with wireline core drilling	1.1 Obtain and confirm work requirements 1.2 Access, interpret and apply documentation required to assist wireline core drilling and confirm work activity is compliant

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	1.3 Identify and minimise environmental issues and potential hazards, and assess and address risks within scope of own role and according to workplace procedures 1.4 Select and wear personal protective equipment required for work activity 1.5 Obtain and interpret emergency procedures and identify steps in case of fire, accident and other emergencies 1.6 Communicate with other personnel on site as required and confirm briefings and handover details are communicated and received
2. Support the wireline core drilling process	2.1 Load, unload, move and handle core drilling equipment and associated tools, sampling devices and connecting equipment according to workplace procedures 2.2 Set up and stabilise racks 2.3 Assemble wireline core barrel, overshot and wireline retrieval components 2.4 Prepare drill string in readiness for tripping and drilling, including adding and removing drill rods using rod and casing handling equipment 2.5 Assist with lowering and retrieving the inner tube assembly using the wireline retrieval system 2.6 Inspect inner tube and core barrel at required intervals and replace worn or damaged components as required 2.7 Monitor hazards and risks, including those associated with wireline systems, and confirm safety of self, other personnel, plant and equipment 2.8 Store and handle tools according to workplace procedures
3. Handle core samples	3.1 Dismantle retrieved inner tube for recovery of core samples 3.2 Take required safety precautions when handling potentially contaminated samples 3.3 Remove core samples from inner tube and place in core trays in required sequence 3.4 Record information on core marker blocks and core boxes

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	3.5 Take precautions and confirm no surface contamination of cores and delicate cores are preserved 3.6 Stack core boxes ready for storage and transportation 3.7 Clean and lubricate inner tube and overshot components and reassemble in preparation for the next run
4. Mix, store and test drilling fluids	4.1 Check labels and read and interpret safety information and hazard codes 4.2 Apply required mixing procedure for the drilling fluid 4.3 Store drilling fluid components and additives according to workplace procedures 4.4 Perform basic tests on drilling fluids and record and report the results
5. Carry out basic maintenance of tools and equipment	5.1 Perform inspections and checks on serviceability of core barrel and wireline retrieval components 5.2 Perform inspections and routine checks on ancillary equipment 5.3 Perform inspections and basic maintenance on rod handling equipment

Range of conditions

N/A

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Assessment Requirements for RIINHB2XX Assist wireline core drilling

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit, including evidence of the ability to:

- assist wireline core drilling on at least two occasions, with each occasion covering at least one complete core run and involving:
    - preparing the work area, racks, core barrel, wireline retrieval assembly and drill string for coring
    - supporting the driller through tripping, coring and wireline retrieval of the inner tube
    - recovering core in correct sequence, preserving its integrity, and recording and storing it ready for transport
    - preparing and testing drilling fluid and reporting results
    - checking, servicing and maintaining wireline tools, rod handling and ancillary equipment.

During the above, the candidate must:

- work safely within the scope of own role, including identifying and controlling hazards, using required personal protective equipment, and following work instructions, site procedures, documentation and emergency arrangements
- select and use tools, equipment and techniques suited to the task, including matching core bits and reamer shells to thread types and applying required lubrication and lifting practices
- communicate and coordinate with the driller and other personnel throughout the work, including at briefings and handovers.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit, including knowledge of:

- key policies, procedures and established requirements for assisting wireline core drilling, including those for:
    - work health and safety, including emergency response
    - environmental protection
    - hazardous substances, including interpreting safety data sheets (SDS) and labels
    - core sample identification, handling and storage
- key principles and factors affecting wireline core drilling, including:

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    - purpose and principles of wireline core drilling, including how core is cut, captured and retrieved without tripping the drill string, and how it differs from conventional core drilling
    - wireline coring systems, components and terminology, and how they work together through the coring cycle
    - drilling tools and consumables, including bits, reamer shells, thread types and lubricants
    - drilling fluids and circulation systems, including their purpose, properties and effect on hole integrity and sample quality
    - factors affecting core quality and integrity
    - common signs of wear, damage and faults in drilling tools and equipment
    - hazards and controls associated with wireline operations, rod handling, manual handling and potentially contaminated samples
- drilling team roles, objectives and communication requirements.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
    - personal protective equipment
    - equipment required to assist wireline core drilling
    - workplace documentation such as drill plans, site plans and procedures, manufacturer instructions and safety data sheets
- be conducted in a safe environment
- be assessed in the context of this sector's work environment
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work 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.

*Guidance on simulated environments has been stipulated in the RII Companion Volume Implementation Guide.

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Industry Experts

An industry expert engaged by an RTO to wholly or partially conduct assessment, independently or together with another assessor, or be involved in an assessment judgement, must also satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Assessors and industry experts delivering training in the drilling sector must also have a minimum of two (2) years industry experience directly relevant to the training and assessment being provided.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
		New unit. No equivalent unit.

Links

Companion volumes, including implementation guides, are found on the national training register - https://training.gov.au/training/details/RII.

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