

# COGMWT1

## Perform pre-job (mechanical wireline) operations



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### Overview

This unit is about performing pre- (mechanical wireline) job operations. You will be involved in activities such as:

- 1 establishing operational requirements
- 2 selecting and testing equipment
- 3 rigging up equipment

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### Performance criteria

- You must be able to:*
- P1 effectively obtained operational instructions and organised the work of self and others
  - P2 clarified any difficulties with relevant personnel
  - P3 accurately confirmed the availability and status of relevant Permits to Work
  - P4 accurately identified and confirmed the availability of relevant utilities
  - P5 accurately confirmed the availability of consumables
  - P6 taken appropriate remedial action where errors, omissions and shortages have been identified
  - P7 identified and selected equipment which conforms to the operational requirements
  - P8 confirmed the equipment is functional and fit for purpose
  - P9 checked the relevant pressure ratings
  - P10 prepared an accurate drawing of the bottom hole assembly
  - P11 accurately identified equipment defects and taken appropriate remedial action
  - P12 sited the equipment for optimum use
  - P13 effectively confirmed the well to be in a condition for work to proceed
  - P14 effectively confirmed the equipment as functional and suitable for operation
  - P15 assembled the equipment in proper sequence
  - P16 identified faults and uncertainties in the assembly and taken appropriate remedial action
  - P17 handled the equipment using safe lifting and handling techniques
  - P18 worked safely in accordance with operational requirements
  - P19 worked safely and in accordance with operational instructions

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### Knowledge and understanding

*You need to know and understand:*

- K1 how to access and interpret operational instructions (to include well sketches)
- K2 who to report difficulties (e.g. unclear instructions, imprecise details, lack of info) to
- K3 how to check the availability of consumables
- K4 how to identify errors, omissions and shortages and what remedial action is available to you (to include report, record, rectify)
- K5 how to work with and within the Permit to Work system
- K6 how to identify and confirm the availability of utilities (to include air, fuel, power, crange, light, scaffolding)
- K7 how to access and interpret information for conditions and limitations of the well
- K8 the principles of hydrate formation (in well and equipment) and its prevention and decomposition
- K9 how to calculate volumes
- K10 the principles and calculation of weak points
- K11 the principles and calculations associated with Hydrostatics (to include SI and oilfield units)
- K12 the limitations of the equipment and the environment in which they are used
- K13 the function and operating principles of downhole toolstring and associated equipment
- K14 how to use internal and external diameter measuring equipment
- K15 the principles and reading of Vernier scales
- K16 how to check the pressure ratings (to include wellbore, annulus, hydrostatic) and understand their implications
- K17 how to access and interpret relevant reference charts and graphs (to include well schematics)
- K18 the effects of the environment
- K19 how to identify equipment defects and what remedial action is available to you (to include report, record, replace, repair, adjust)
- K20 how to site and assemble equipment (to include weight distribution, lifting equipment, order of use in assembly, zoning restrictions, line of sight)
- K21 how to check and make a decision on the well condition
- K22 principles of well control using mechanical barriers and surface pressure control equipment
- K23 how to carry out bleeding down and pressure equalisation within equipment
- K24 how to identify equipment faults and uncertainties and what remedial action is available to you (to include report, record, repair, replace, adjust)

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- K25 depth and weight monitoring techniques (to include depth counters, weight indicators, recording devices)
- K26 hazards that are likely to be encountered and how to deal with them
- K27 the effects of weather on operations

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### Additional Information

#### Scope/range related to performance criteria

- 1 how to select, use and care for PPE (to include sight/hearing protection, gloves, footwear, hard hats, respirators)
- 2 the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements
- 3 how to interpret operational requirements (e.g. relevant policies, procedures, instructions, codes of practice, standards, schedules)
- 4 the well parameters to be considered (to include pressure, temperature, depth, deviation, completion type, fluid type, flowrate) the effects of the installation types (i.e. fixed and floating and land)
- 5 winch
- 6 stuffing box
- 7 grease injection system
- 8 downhole toolstring (to include rope socket, stem, jars, knuckle joint)
- 9 power supply
- 10 wellhead/ESD system
- 11 hand tools
- 12 lubricator/riser
- 13 pressure equipment
- 14 ancillary wellhead equipment
- 15 wireline valve
- 16 hydraulic controls

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**Developed by** Cogent

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**Validity** Current

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**Status** Original

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**Originating organisation** Cogent

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**Original URN** MWT1

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**Relevant occupations** Retail and commercial enterprise; Warehouse and distribution; Process, Plant and Machine Operatives; Process Operatives

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**Suite** Well Services: Mechanical Wireline

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**Key words** Mechanical Wireline, testing, rigging, winch, hand tools, lubricator, riser, hydraulic controls, stuffing box