

Module A Exam

Water Act 1992 section 49

Form S49 Exam

This is an approved form in accordance with regulation 3 of the Water Regulations. Completing a Module A exam with an 80 per cent pass mark is a requirement when applying for an interstate driller licence conversion and a new drilling licence in the Northern Territory. This exam should be completed and submitted with your application.

| 1. Module A Exam | |
|---|------------------------------|
| ^ From 1 July 2020 to 30 June 2021, 1 penalty unit = \$158 | |
| Part A: True or False - this section is worth 6 marks (out of 20 marks) | Answer |
| 1) Bore work and drilling licences are regulated in the Northern Territory under the Water Act 1992. | True / False |
| 2) If a person has a drilling licence and fails to comply with a term or condition of that licence that person may be: a) issued with an infringement notice for 5 penalty units (or \$790^) b) prosecuted in a court of law, with a maximum penalty of 500 penalty units (or \$79,000^) | True / False True / False |
| 3) A person doing or supervising bore work should have a copy of their licence readily available to provide a copy to the Controller in a reasonable time frame, if the Controller requests to see a copy. | True / False |
| 4) If a person does bore work in a water control district without a permit, including a person with a drilling licence, the person may be: a) subject to a maximum penalty of 500 penalty units (or \$79,000^) or b) an infringement notice, which for an individual is 5 penalty units (or \$790^) or for a business 10 penalty units (or \$1,580^). | True / False True / False |
| Part B: Multiple choice - this section is worth 4 marks (out of 20 marks) | Answer |
| 5) Bore work means: a) drilling, decommissioning, constructing, altering, deepening, plugging, backfilling or sealing off a bore b) removing, replacing, altering, slotting or repairing the casing, lining or screen of a bore c) all of the above. | |
| 6) Bore work must be: a) done by a person with a drilling licence of a class appropriate to the works b) conducted in accordance with the current edition of the Minimum Construction Requirements for Water Bores in Australia c) done in accordance with the conditions of a bore work permit in a water control district. | |
| 7) Who can apply for a bore work permit? a) The owner of the bore b) A licensed driller c) All of the above. | |

- 8) In accordance with the requirements of the water legislation, the Minister appoints the Drillers Qualification Advisory Committee (DAQC). Information about DQAC is available from the department's website at: www.denr.nt.gov.au/DQAC. Information about its functions can be found in its terms of reference under the 'About the committee' link. DQAC functions to:
- Provide advice and recommendations to the Controller on driller licences.
 - Provide a forum for consultation and communication on bore construction and construction materials.
 - Advise on and assist with information to the drilling sector and users of driller services.
 - Provide feedback on proposals to update and review the drilling provisions in the water legislation.
 - Provide advice on the content of guidelines, factsheets and other documents relating to water bore drilling.
 - All of the above.

Part C: Statement of bore – this section is worth 10 marks (out of 20 marks)

The Controller of Water Resources (Controller) is appointed by the Minister and, amongst other things, has responsibility for overseeing the regulation of bore work and drilling licences in the Northern Territory. The Controller may require a person with a drilling licence to provide certain information and samples. The information is generally required in the format of a statement of bore and includes a variety of information about the bore and the work carried out. This information is specified in the Water Regulations 1992. It is a requirement of all Northern Territory bore work permits and drilling licences that a statement of bore is provided for any bore work undertaken.

Using the information provided below complete a statement of bore with composite log of bore and attach with this Module A Exam to your application for a new drilling licence or interstate drillers licence conversion. The template for a statement of bore is available from the NTG website at: nt.gov.au/Drillers

Bore work information

Pemco Mining Company engaged Mr A. Pot (licence number NT307) of Ti Tree Drilling Contractors to drill and construct a bore (under bore work permit BCPX818) on NT Portion 3521. The Pemco Mining Company contract specified a requirement for a minimum 200 mm pump housing to meet the processing plant's water requirements.

Mr Pot has a Class 2 NT driller licence with no restrictions and has a trainee driller Mr P. Kettle. Mr Pot is using his next available registration number, RN149291, as provided by the department to identify the bore. The bore is located on the northern side of the airstrip, 1 km east of the airport terminal and adjacent to a light aircraft hangar.

The work was done with a rotary rig using air/foam and mud. Works started on 1 September 2020 and ended on 19 September 2020. The bore was drilled to 99 m and after logging, backfilled with gravel to 89 m. A steel surface collar 273 mm OD with a wall thickness of 6.4 mm was set to 7.0 m and grouted to surface. 219 mm casing with a wall thickness of 6.4 mm was run to 67.8m and a cement plug was set from 67.8 to 61 m at the bottom of the casing. The annulus was backfilled from 61 to 6 m with coarse sand and then grouted back to the top of casing.

Top of (168 mm to 206 mm) packer was set at 66.24 m; the packer was 0.26 m in length. A liner of 168 mm OD stainless steel screens and casing were welded together with a bottom end plate and lowered into place. Bore development was carried out by surging, followed by airlifting for 2.5 hours from 64 m.

The bore was capped and 1 m x 1 m x 100 mm concrete block placed around the casing.

A GPS reading was taken providing the location of the bore at GDA2020 zone 52 easting 546962 and northing 8424303. Water and strata samples will be sent to the department's depot in Winnellie, Darwin. Hole diameters, strata identified, construction materials and other details are listed below.

| Hole diameters are | Strata identified included | Construction materials included |
|---|--|---|
| <ul style="list-style-type: none"> • 0 to 7m: 330mm: using air and foam • 7 to 67.8m: 254mm using Biogel • 67.8 to 99m: 200mm using air | <ul style="list-style-type: none"> • 0 to 6.0m: laterite • 6.0 to 28.0m: Clays multi coloured • 28.0 to 48.0m: Clay pink and purple sandy • 48.0 to 65.0m: Clay medium to coarse sandy • 65.0 to 66.8m: Clay red, brown, silty • 66.8 to 69.0m: Dolomite hard fresh • 69.0 to 85.0m: Dolomite weathered broken • 85.0 to 99 • Dolomite hard fresh | <ul style="list-style-type: none"> • +0.3 to 7.0m: 260mm ID steel casing – grouted to surface • +0.5 to 67.8m: 206mm ID steel casing • 66.24 to 66.5m: 158mm ID stainless steel packer – welded • 66.5 to 69.0m: 158mm ID stainless steel casing – welded • 69.0 to 85.0m: 152mm ID stainless steel screens, 1.5mm aperture – welded • 85.0 to 89.0m: 158mm ID stainless steel sump – welded • Airlift = 35L/s • SWL = 15m • Temp = 32°C • pH = 6.8 • Cond = 202 • Bottle No = PCO1 |

2. Declaration

I hereby declare that I have provided all the answers to the questions on this exam.

| | |
|------------------------------|--|
| Applicant's signature | |
| Name (print) | |
| Date | |

Where and how to submit this form

Email this completed exam, the statement of bore prepared and a passport style photograph with the relevant completed application to water.licensing@nt.gov.au.

| Office use only | | | |
|----------------------|---|---|------------------|
| Date received | / | / | Reference |
| Received by | | | |