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Edition 1

SOUTH AFRICAN NATIONAL STANDARD

Development, maintenance and management of groundwater resources

Part 2: The design, construction and drilling of boreholes

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Table of changes

Change No.	Date	Scope

Foreword

This South African standard was approved by National Committee STANSA SC 5120.12B, *Water supply, equipment and systems – Groundwater extraction*, in accordance with procedures of Standards South Africa, in compliance with annex 3 of the WTO/TBT agreement.

Annex A is for information only.

SANS 10299 consists of the following parts, under the general title *Development, maintenance and management of groundwater resources*:

Part 0: *Glossary of terms.*

Part 1: *The location and siting of water boreholes.*

Part 2: *The design, construction and drilling of boreholes.*

Part 4: *Test-pumping of water boreholes.*

Part 5: *The design, selection and performance of pumping equipment for production boreholes.*

Part 6: *The installation and commissioning of pumping equipment for production boreholes.*

Part 7: *The rehabilitation of water boreholes.*

Part 8: *The management of water boreholes.*

Part 9: *The decommissioning of water boreholes.*

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Development, maintenance and management of groundwater resources

Part 2:

The design, construction and drilling of boreholes

1 Scope

This part of SANS 10299 covers the requirements for the design, construction and drilling of machine-drilled boreholes.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of SANS 10299-2. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on SANS 10299-2 are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from Standards South Africa.

ASTM F480, *Standard specification for thermoplastic well casing pipe and couplings made in standard dimension ratios (SDR), SCH 40 and SCH 80.*

BS 879-2, *Water well casing – Part 2: Specification for thermoplastic tubes for casing and slotted casing.*

SANS 241 (SABS 241), *Drinking water.*

SANS 10299-0, *Development, maintenance and management of groundwater resources – Part 0: Glossary of terms.*

SANS 10299-9, *Development, maintenance and management of groundwater resources – Part 9: The decommissioning of water boreholes.*

3 Definitions

For the purposes of this part of SANS 10299, the definitions given in SANS 10299-0 apply.

4 General requirements

Borehole design, drilling and construction is a complex operation and should be done by a competent person. Boreholes intended for commercial abstraction, or to be drilled in aquifers where hydrogeological problems are known to exist, should be designed, drilled and constructed under the