BGS MARINE WIRELINE CORE BARREL SYSTEM

TECHNICAL SPECIFICATIONS

The system comprises a suite of wireline core barrels, handling and torquing systems, core extraction/archiving facilities, workshop/spares containers, and a selection of core bits to suit all geological formations. CPT, temperature, other sensor probes and downhole logging tools can be incorporated into the spread, which operates with an API drillstring and drillcollars. A minimum 101.5 mm (4 ”) ID is required in the drillstring tubulars to allow wireline operation.

OUTER CORE BARREL

This is 178 mm (7 ”) OD and 5 m long with API box thread for direct connection to drillcollars. Accepts bit diameters from 191 mm (7.5 ”) upwards, depending on hole depth or geological formation.

OUTER BARREL DRILL BITS

BGS carries a range of outer barrel bits. As standard we have a 98 mm (3.86 ”) ID and 242 mm (9.5 ”) OD but various ODs (from 191 mm upwards) and styles to suit coring in various geological formations can be custom made. The core is trimmed to size by a cutting shoe or separate core bit, which is an integral part of the inner barrel system being deployed.

INNER CORE BARRELS, DRILLING AND SENSOR SYSTEMS

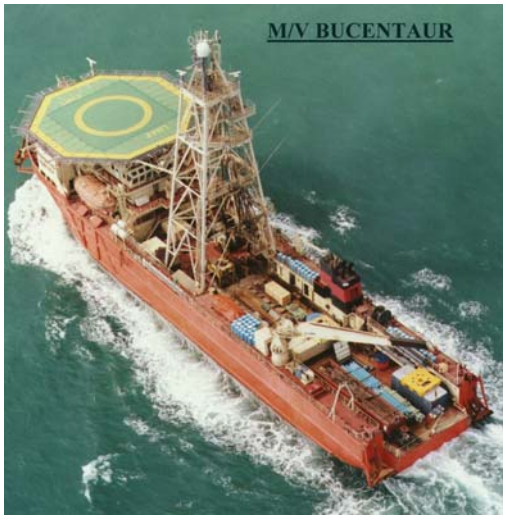
Piston core barrel for soft formations. Core size 62 mm, collected in plastic liner.
Push core barrel for soft to firm and non-cohesive formations. Core size 62 mm, as above.
Push core rotating barrel for firm and non-cohesive sediments. Core size 62 mm, as above.
Non-rotating core barrel for consolidated soils and rock formations. Core size 61 mm OD.
All inner core barrels have a range of catcher systems to assist with core retention. Core length is up to 4.5 m per core run, push samples can be made any length to 4.5 m.
Multipurpose insert rod allows drilling by making the coring bit a full face drill bit or can carry sensors or CPT rods for downhole measurements with remote memory tools.
All Inner Barrels can be run with an **inbuilt non-return valve** to assist with the prevention of gas escape up the drillpipe while coring or drilling is being carried out. A **‘latch-in’ indicator** and **downhole hammer system** is under review.

WIRELINE OVERSHOT AND RETRIEVAL SYSTEM

Inner barrels are wireline retrievable using proven mining core barrel retrieval systems. This allows continuous coring operations without having to pull the drillstring to recover each core and the flexibility to drill/spot core or take measurements without recourse to string trips.

OPERATIONAL REQUIREMENTS

A suitably equipped drilling vessel is required with sufficient derrick capacity and deck space to allow for the BGS coring spread of 2 x 10 ’ containers and 1 x 20 ’ container base core barrel rack together with suitable laboratory space for examination, archival and core storage purposes. The equipment has no depth limit (either water or sub-surface) and the operational limit is determined by work requirement, legislation, derrick capacity or operational circumstances.



Left *DV "Bucentaur" one vessel used with BGS Core Barrel System.*

Middle left *Sea bed template system used as a method of remote entry and re-entry to a borehole.*

Middle right *Drillfloor view when running drillpipe.*

Bottom left *Selection of BGS core bit types*

Bottom right *One mile of pipe below deck*

Selection of BGS Core Bits

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