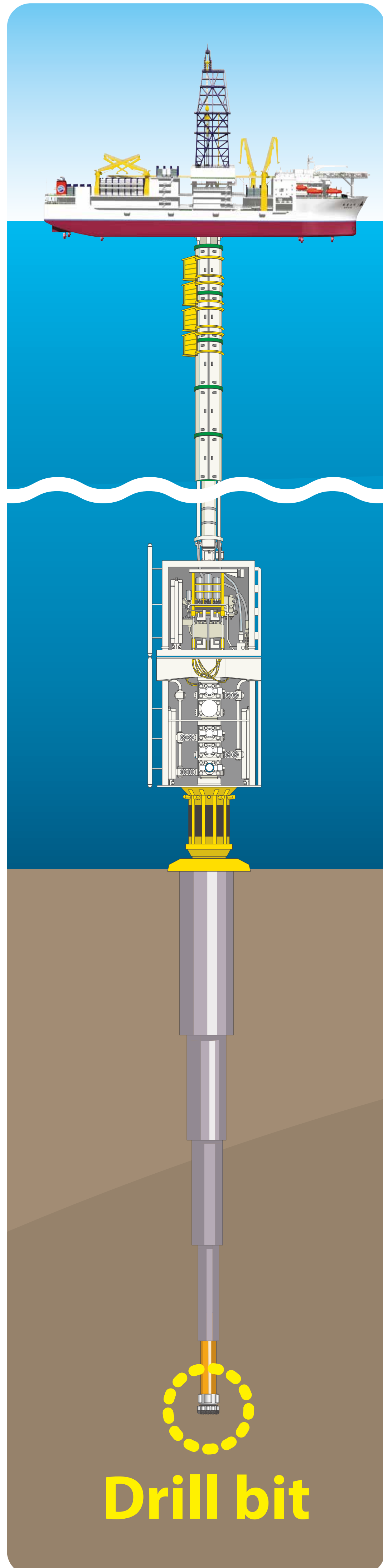


Matching formations and Drill bits

Types of Drilling Bits



There are two kinds of drilling bits used on *Chikyu*. One type is used for drilling a borehole, and the other is used for taking core samples.

Drill bit




Moving parts	Roller Bit	No moving parts	Fixed Cutter Bit
	Milled Tooth Bit	Insert Bit	Polycrystalline Diamond Compact Bit
			

Photo : BAKER HUGHES Drill Bits Catalog

Core bit

PDC Core Bit	Roller Cone Core Bit	Natural Diamond Core Bit
		



Used bit

Bit selection for different formation

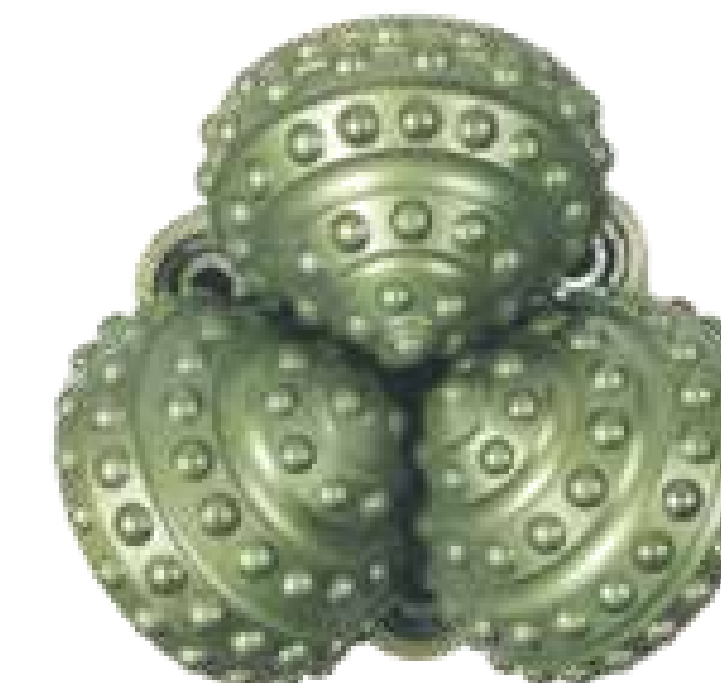
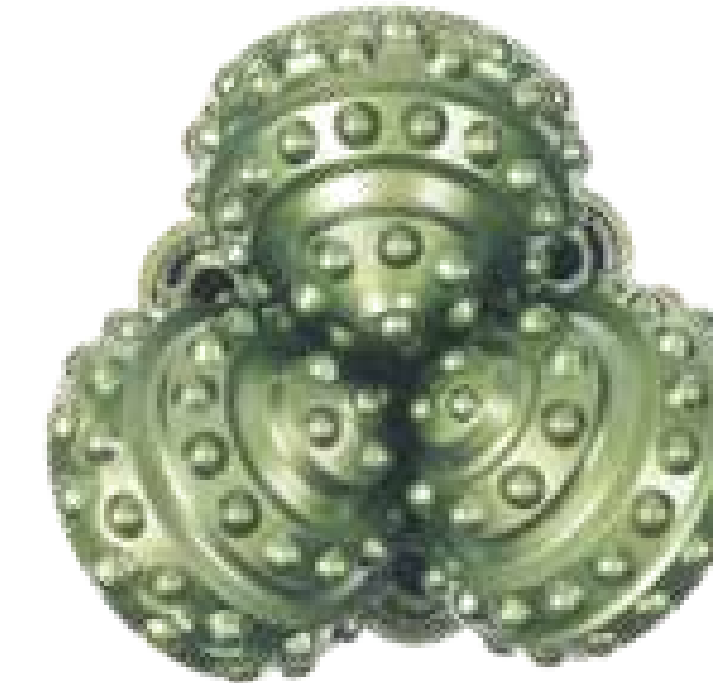
- Soft formation: fewer and longer bit teeth.
- Hard formation: Increase the number of teeth and shorten tooth length.
Bit uses higher rotation and weight on bit

Teeth: Less
Tooth height: Long

Teeth: More
Tooth height: Short

Shape of bit

Formation hardness



Very soft

Soft

Slightly soft

Slightly firm

Hard

Very hard



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