

CABLE-TOOL DRILLING

Mark the statements as true (+) or false (-):

1. The percussion method of drilling cable is one of the newest cutting actions utilized in the drilling industry.
2. The cable tool drilling system was developed in China over 4000 years ago.
3. Cable tools are not used today because they are outdated.
4. Cable tools require a lot of maintenance.
5. Cable tools are mainly used for drilling in hard rock formations.
6. Slow penetration rates are not characteristic of the cable tool drilling system.
7. The baler is used to collect cuttings for ID and recording purposes.
8. The cuttings from the borehole are usually large in size.
9. The drive cap is primarily used by cable tool operators when increased friction is encountered.
10. Casing is required even after a suitable aquifer is encountered.

Choose the correct answer to the questions:

1. What is the percussion method of drilling cable?
a) A method of drilling using a hammer
b) A method of drilling using a chisel
c) A method of drilling using a saw
d) A method of drilling using a drill bit
2. Where was the cable tool drilling system developed?
a) Japan
b) China
c) India
d) Russia
3. What are the advantages of the cable tool drilling system?
a) High horsepower requirements
b) Expensive equipment cost
c) Virtually indestructible
d) Complex design

4. What type of materials are cable tools mainly used for drilling?
- a) Hard rock formations
 - b) Soft rock formations
 - c) Both hard and soft rock formations
 - d) Only consolidated materials
5. What is the typical depth of wells drilled using the cable tool drilling system?
- a) Over 100 feet
 - b) Approximately 100 feet or less
 - c) Approximately 200 feet or less
 - d) Approximately 500 feet or less
6. What is the flushing system used in the cable tool drilling system?
- a) A system that requires the drill string to be tripped out of the hole and the baler to be tripped into the hole
 - b) A system that requires the drill string to be tripped out of the hole and the baler to be emptied
 - c) A system that requires the drill string to be left in the hole and the baler to be emptied
 - d) A system that requires the drill string to be left in the hole and the baler to be tripped into the hole
7. What is the baler used for in the cable tool drilling system?
- a) Measuring approximate water pumping rates and levels at any time during the well construction
 - b) Collecting cuttings for identification and recording purposes
 - c) Removing accumulating cuttings by dumping them in the mud spunk
 - d) All of the above
8. What is the purpose of casing advancement in the cable tool drilling system?
- a) To remove the cuttings
 - b) To identify the geology
 - c) To monitor the water flow
 - d) To advance the casing
9. What are the two methods for casing advancement in the cable tool drilling system?
- a) The drive cap and the drive blocks
 - b) The drill string and the baler
 - c) The welding equipment and the torches
 - d) The check valve and the dart valve
10. What is the purpose of grouting the annular space between the working casing and the permanent casing after borehole construction?
- a) To improve efficiency
 - b) To ensure a watertight seal
 - c) To identify the geology
 - d) To monitor the water flow