

A complete collection of diagrams of down-the-hole drill structures

What is down-the-hole (DTH) drilling?

The document discusses Down-The-Hole (DTH) drilling. DTH drilling involves a mini jackhammer located behind the drill bit that breaks rock into small pieces. It is a fast way to drill hard rock and can drill holes up to 4500 meters deep. DTH drilling is commonly used for mining, exploration, water wells, geothermal applications, and construction.

What is a down-the-hole drill?

A down-the-hole drill, usually called DTH by most professionals, is basically a jackhammer screwed on the bottom of a drill string. The fast hammer action breaks hard rock into small cuttings and dust that are evacuated by a fluid (air, water or drilling mud). The DTH hammer is one of the fastest ways to drill hard rock.

What are the components of a drill system?

The hoisting system, to raise and lower the drill string. The circulation system, to circulate drilling fluid or "mud". The rotary system, to rotate the drill string and hence the drill bit. The well control and blowout prevention system, for controlling the well especially during emergencies.

How does a DTH drill work?

DTH equipment consists of a drilling hammer and a piston-powered by compressed air. As the drill string rotates, the drilling hammer strikes down on the rock. The drill bit receives its striking power from a piston inside the hammer that is powered by compressed air.

How long did it take to drill a 12,000 ft hole?

The original estimate for completion of a 12,000-foot hole was 30 days using the conventional rotary technique, which was reduced to 13 days using the DTH method. Before DTH was used, drillers would typically case the vertical portion of the well and convert to rotary drilling to drill at a tangent.

Why do you need a down-the-hole drilling tool?

Down-the-hole drilling tools are capable of delivering high-performance results in various geological conditions, ensuring reliable and efficient water well construction. This makes them a preferred choice for ensuring access to clean and sustainable water sources.

The down-the-hole hammer drilling process begins with the hammer being located behind the drill bit, which is then connected to the end of the drill ...

Drill charts are referred to when drilling holes in materials like wood, metal, concrete etc. If you are a drilling expert, you probably already ...



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The title of this publication is DRILCO Drilling Assembly Handbook. The following pages are devoted to the entire drilling assembly, from the swivel to the drill bit. Useful information about ...

Drilling Petroleum Drilling Engineering: Is the application of science and technology to drill oil wells, which are holes in the earth, made for the purpose of extracting oil and gas from ...

Down-the-Hole (DTH) drilling is a technique used to create deep, precise holes in hard rock and challenging ground conditions. In this method, ...

Down-the-hole hammer (hereafter DTH) drilling is an air hammer drilling technique designed for drilling through bedrock and features a typical drill string length of 200 m or shorter due to its ...

Down Hole Drilling, or DTH, refers to a drilling technique that involves a hammer being directly attached to the end of a drill string. This method is widely used in mining and construction for ...

A down-the-hole drill, usually called DTH by most professionals, is basically a jackhammer screwed on the bottom of a drill string. The fast hammer action breaks hard rock into small ...

Introduction The purpose of this manual is to assist MSF field engineers and Environmental Health experts to supervise boreholes drillings for providing sustainable water points to the ...

We have seen down-the-hole products being used in different applications all over the world. We can assist, not only with the complete drill string, but also with the knowledge to help our ...

Key Components of a DTH Drilling System DTH Hammer Design for Optimal Energy Transfer How Down-the-Hole (DTH) hammers are built really matters when it comes to ...

blows to the drill steel or rods and at the same time slowly rotates them. The drills vary in size from small hand-held rock drills for drilling charge holes to large truck-mounted rigs capable of ...

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Learn about water well systems and how they work with a comprehensive diagram. Explore the different components and functions of a water well ...

Down-the-hole drilling (DTH) essentially involves a drilling hammer at the bottom of a drill string. It relies on three elements for drilling holes: bit loading (weight), rotation and air. These active ...

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DTH drilling, also known as Down-the-Hole drilling, is a method used to drill boreholes into the earth's surface. This technique involves a hammer that is ...

A "down the hole" (DTH) drill is a piece of drilling equipment used in mining, construction, and exploration activities. It is specifically designed for drilling ...

A "down the hole" (DTH) drill is a piece of drilling equipment used in mining, construction, and exploration activities. It is specifically designed for drilling large-diameter holes in hard rock ...

A Down-the-Hole (DTH) hammer is a drilling tool that operates at the bottom of a drill string, using compressed air to power a piston and deliver high-impact energy, enabling ...

Unleash the power of DTH hammer drills with this insightful article! Discover how these drills expertly navigate tough rock formations using compressed air for precise drilling. ...

ABSTRACT Since their first production application in Sweden in 1995, water-powered, down-the-hole hammers (WDTH) have been used throughout the world in many different drilling ...

Air Percussion dustries and is often used in conjunction with auger boring. The driller uses a down-the-hole or piston-driven hammer to drive a heavy drill bit into the rock. The cuttings or ...

Measuring Structure in Non-Oriented Drill Core My drill core is not oriented. How do I measure structure? Down-hole orientation surveys record ...

Down the hole drilling is preferred in many industries due to its efficiency and accuracy. The pneumatic hammer used in DTH drilling delivers high-impact ...

Reverse Circulation drilling utilizes dual wall drill rods made up of an outer rod and an inner tube. The inner tube is designed to provide a continuous path for the drill cutting to pass from the bit ...

A down-the-hole drill, usually called DTH Drilling Rig, is basically a mini jackhammer screwed on the bottom of a drill string. The speedy hammer ...

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In down-the-hole drilling a drill rod is fitted with a hammer at its lower end. The hammer, which is mounted on the drill bit, is activated through the addition of ...

Drifter drilling becomes progressively slower with increasing depth. DTH hammers however, can drill in one day what a cable tool rig would take weeks to complete. The quarrying, water well, ...

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