

# MUDHAMMER

## High-Power Percussion Drilling Technology

The Drillstar MUDHammer is the first field-proven hammer drilling solution capable of using most standard, weighted drilling fluids.

The fruit of 20 years of research and development, it brings percussion drilling performances all the way down to deeply buried formations. It relies on 2 main components:

- A high-power, fluid-driven downhole hammer, delivering high-energy impacts dozens of times per second.
- A range of specific hammer bits, designed to deliver the best ROP based on the formation and depth drilled.

### High Power for higher ROP.

Unlike PDC and Roller cone bits, hammer bits rely primarily on impact energy to drill rather than weight & rotation. This means high energy levels can be transmitted to the rock while maintaining lower WOB, RPM and torque levels.

Unlike existing low-power fluid hammers, the Drillstar MUDHammer is not designed to be used with conventional PDC or Roller cone bits, due to the much higher power transmitted to the bit.

This higher drilling power translates directly into higher ROP, especially in hard or very hard formations. ROP gains of 200% and more over rotary drilling have been observed in hard lithologies.

### Designed for deep drilling

The MUDHammer solution has been developed from the start with deep drilling and Oil & Gas standards in mind. It's adapted to most drilling rigs and mud systems, and offers improved safety over existing technologies:

- Integral bit: no moving part, bearing, etc.
- All components designed to be fishable.
- High flow rates for cuttings uplift.



MUDHammer 6"



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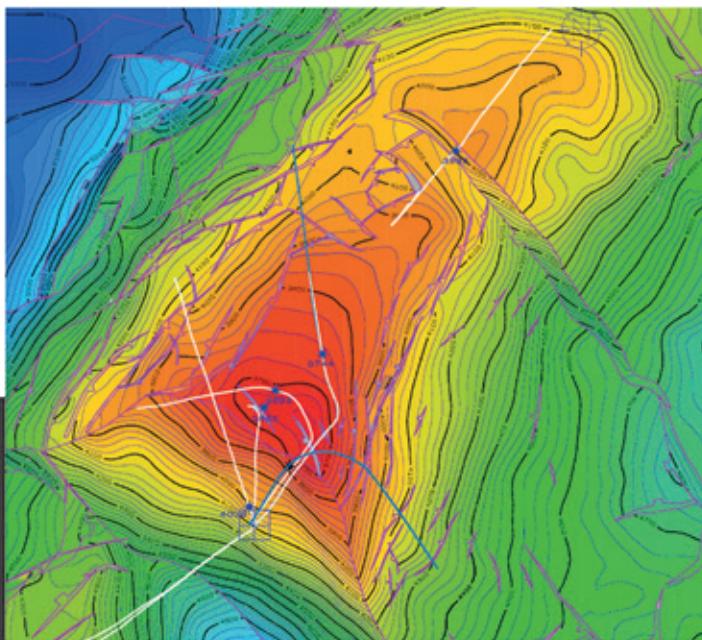
## Publications

SPE-188579-MS High-Power Mudhammer: A Promising Solution for Hard Formations Drilling.

## Standard dimensions

Type	Bit OD (in.)	Body OD (in.)	Overall length* (in.)	Nominal Pressure (PSI)	Max. Flow Rate (GPM)
MUDHammer 6"	6 - 6 1/2	4.9	56	1,450	370
MUDHammer 8 1/2"	8 3/8 - 8 5/8	7.1	81	1,450	750

\*including top sub and bit.



The MUDHammer is well adapted to hard lithologies, such as crystalline basement rocks.

Downhole Innovations, Made in France