M-I SWACO
A Schlumberger Company

Coiled Tubing MAGNOSTAR

FEATURES

- High-strength rare earth magnets
- Available in 2 7/8" and 2 3/8"
- One-piece, full-strength mandrel
- Designed with "valleys" to trap debris
- Through-bore design
- Offsets valleys

ADVANTAGES

- Prevents debris from being blown-off or scraped-off the tool
- Covers 360 degrees of the wellbore
- Allows high flow and ball drop capability
- High-capacity in short length

The M-I SWACO Coiled Tubing (CT) MAGNOSTAR† magnet is used to remove ferrous debris from the wellbore. Using the improvements of a highly successful design and lessons learned from the MAGNOSTAR magnet, this coiled tubing sized tool will remove large amounts of ferrous debris from the wellbore.

Applications

The CT MAGNOSTAR magnet is usually run on top of the CT motor in milling or clean-up operations. Using a magnet on top of the motor helps keep hard materials, like plug slips and metal swarf clear as the milling operation is carried out. This reduces the risk of motor stalls and speeds up operations.

The CT MAGNOSTAR magnet can be used with coiled tubing while cutting windows, drilling out plugs, milling stuck formation isolation valve (FIV) or while simply doing a clean-up run.

The CT MAGNOSTAR magnet is designed with a through bore with a large ID which allows balls to be dropped to disconnect a sub below and circulate at a high rate, if needed.

It is highly recommended to run the CT MAGNOSTAR magnet during milling operations to remove heavy metallic pieces from the wellbore that cannot be circulated out, as well as to capture ferrous debris before it reaches the BOP.

The CT MAGNOSTAR magnet can also be used in fishing operations to collect smaller pieces of debris that can be recovered in the valleys of the tool

How it Works

The tool is run above the motor and collects ferrous material in the valleys of the tool where the high strength rare earth magnets are located. The design ensures the debris is not “blown” from the magnet area or scraped off as the BHA is removed from the well. The use of rare earth magnets also allows the tool to maintain a high magnetic field at higher temperatures where common magnets will rapidly lose their magnetic field.

The CT MAGNOSTAR magnet is added to the BHA, preferably on top of the motor, and is run in the wellbore where the milling operation is carried out without any changes. Once the CT MAGNOSTAR magnet is pulled out of the hole the metallic debris is removed using a non-magnetic tool. The debris is then classified and weighed.

It is recommended to run as many CT MAGNOSTAR magnets as needed to capture the expected debris that will be generated during the milling operation. This will help prevent the metallic debris from reaching the BOP and lodging in its cavities.

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