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HDD PDC OPERATIONAL SUMMARY

Operational Summary

- Minimum RPM should be 60 to 80 RPM
- Maximum weight on Bit (WOB) – 3,000 lb per Inch diameter. E.g. 6” bit is 18,000 lb.
- Drilling Fluid Flow Rate
 - 20 GPM up to 5”
 - 30 GPM from 5” up to 5 7/8”
 - 40GPM from 5 7/8” up to 7 7/8”

Bit Preparation

- Handling Fixed cutter PDC Bits
- Care needs to be taken with the Diamond cutting elements
- Always place bit on Softer surface for example wood, rubber mat, plastic

Installation of Nozzles

- Nozzle holes should be inspected and free of debris before installation
- Install Seal into the bottom of nozzle port while insuring they remain flat on the sealing surface
- Thread lock should be applied to all threads of nozzles and tightened with Nozzle Wrench

Make-up Torque

- Visually inspect thread pin for any debris
- Apply anti seize thread compound
- Make up once in rig to recommended API torque spec

PDC Entry into existing Hole

- Upon re-entry of an existing hole one should see an increase on torque as well as WOB which will indicate either contact with bottom of hole or pre-existing cuttings.
- PDC bits usually show an increase of torque before WOB appears
- NOTE: ALWAYS AVOID HIGH WOB WHEN IN OLD CUTTINGS AS THIS WILL CAUSE BIT BALLING.
- As soon as previous cuttings have been reached continue to rotate to the bottom of hole at full circulation until certain driller has reached the true bottom of the hole.
- WOB should not exceed 1,000 lbs per inch of bit at an rotational rate of 60-80 RPM.

Reaming - Tripping in the Hole

- Trip slowly any problem areas in the hole while washing plenty of drilling fluid and/ or reaming if necessary. If major hole issues are present a separate cleanup run to help straighten the hole may be necessary.
- Please remember while tripping the hole PDC bit are susceptible to damage especially cutter damage.
- Bits with smaller junk slots (groove between cutter blades) may produce surge pressures due to the restrictive space.
- Pumping drilling fluid downhole can help with hang ups as well as flushing the junk slots clean for ease of retraction of the bit.
- Recommendation is to ream 80-90ft. at reaming speed with full circulation.
- Trip back out.

Please note this document is intended as a summary for PDC Operational use, please always consult Infinity Tool MFG personnel before operating a PDC bit for the first time. For technical help please call +1 618 439 4042.