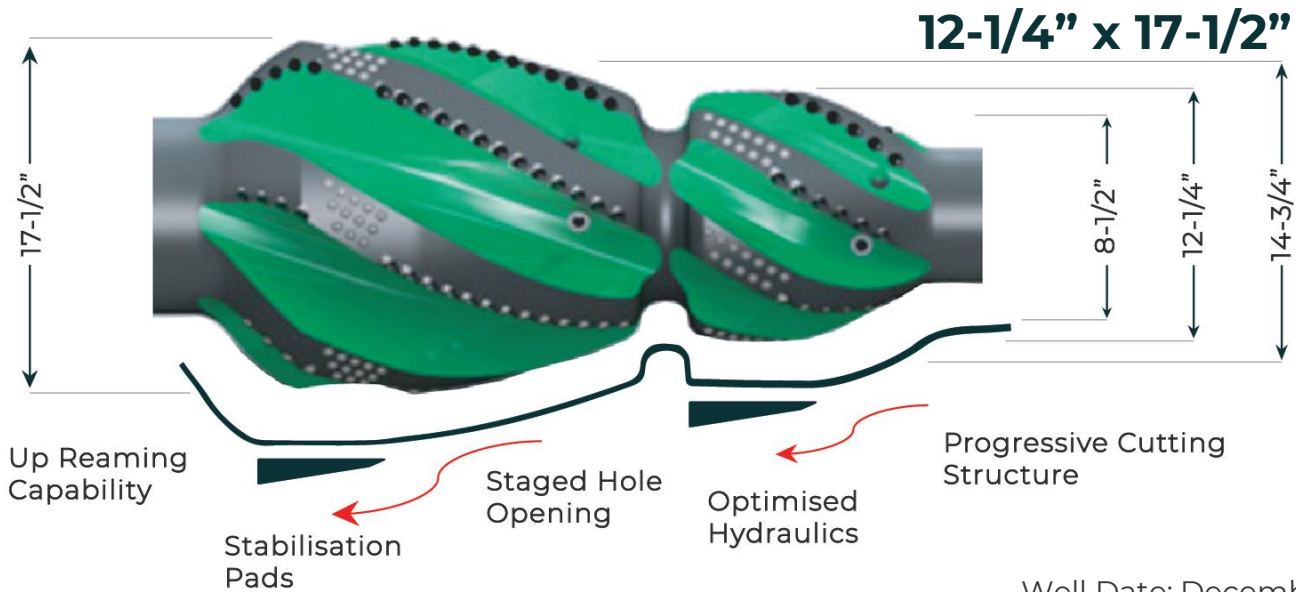


OMNI-MBR

OMNI MULTI BORE REAMER RUN HISTORY



Well Date: December, 2015

WELL Directional well in the **F9-A5 (PCSB)**, F9-North field located in Offshore Sarawak, Malaysia.

WELL OBJECTIVE The objective of the well was to directional drill a 12-1/4" pilot hole prior to opening up to 17-1/2".

HOLE ENLARGEMENT OBJECTIVE The 12-1/4" hole was tracked and enlarged to 17-1/2" diameter to run and set the 13-3/8" casing.

BOTTOM HOLE ASSEMBLY The OMNI-MBR multi staged opener was run with an 8-1/2" bullnose and 12-1/8" string stabilizer in tandem with the OMNI-MBR.

PERFORMANCE The OMNI-MBR hole opener tracked and opened **400 meters** from 216 m to 616 m of 12-1/4" to 17-1/2" hole from vertical to **20 degrees** inclination at **55 m/hr** in one run.

DULL CONDITION The final dull condition was **1-1-NO-A-X-IN-NO-TD**. The OMNI-MBR was in a rerunnable condition.

- **SUCCESSFUL** to directionally track pilot hole in a soft formation while opening up from 12-1/4" to 17-1/2" in a single run in the original path.

- 1-1 dull grading showing excellent hydraulic flow distribution across OMNI-MBR for PDC cooling and cuttings evacuation.

- OMNI-MBR made up offline onshore prior sending to the rig to save rig time and improve operation efficiency.

- The OMNI OMNI-MBR provides the ideal solution to bottom hole enlargement and reaming while maintaining a high degree of stability during drilling.