

CASTILLA NORTE FIELD, COLOMBIA

WELLS CASTILLA NORTE 111, CASTILLA NORTE 53

Lithology	Sandstone
Crude production increase, bbl/d	186 to 295
Recovered debris, lbm	7.07

Background

To reduce trips, time, and costs, Ecopetrol's original plan was to trip with tubing conveyed perforation (TCP) to perforate a 7-in liner, and then use a second trip to run a RIDGEBACK BURR MILL* perforation deburring tool to condition and clean the perforated section in preparation for subsequent run of an isolation packer between formations K1 and K2. Schlumberger proposed perforating and cleaning in the same trip using a higher-torque tubing to convey the perforation tool and deburring tool. The BHA would also include a MAGNOSTAR* high-capacity magnet to capture metal debris to avoid equipment or formation damage.

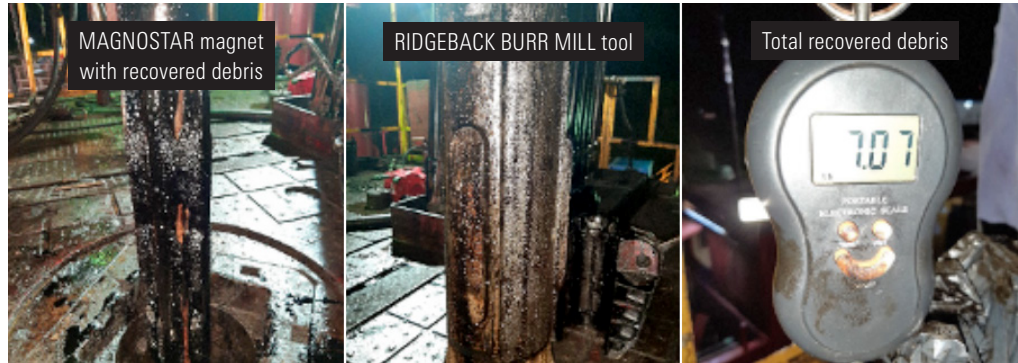
Technologies

- RIDGEBACK BURR MILL perforation deburring tool
- MAGNOSTAR high-capacity magnet

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Ecopetrol Combines Cleaning and Perforating Run to Reduce Operational Time and Saves USD 12,000

RIDGEBACK BURR MILL tool and MAGNOSTAR magnet help eliminate second run, increase production nearly 60%, and return well to production ahead of schedule, Colombia



Ecopetrol successfully perforated and cleaned the 7-in liner in a new production interval in a single trip, rather than two separate trips, lowering operational time by 28 h and saving USD 12,000. Crude production increased from 186 to 295 bbl/d, and 58.6% of the increase was from the new perforating zone. Moreover, the well produced earlier than expected due to the reduction in operational time, delivering revenues ahead of schedule.