

A Successful Section Milling and Hole Enlargement operation in Colombia

An efficient abandonment operation in 7 inch casing was completed using a K-Mill and Underreamer in two days.

CHALLENGE

The customer required a section milled in 7 inch casing at a position where the casing collar was located.

SOLUTION

WIS recommended a K-Mill with tungsten cutters and an underreamer to successfully mill the section and enlarge the hole up to 16 inch diameter.

RESULT

- Successfully completed section milling operation in 7 inch casing, including the casing collar.
- Successfully enlarged the wellbore to 16 inch diameter.
- The operation was completed within two days.
- The section mill cutter knives and underreamer cutter arms came out of the hole in an acceptable condition after use.
- The customer then concluded the abandonment operation.



A K-Mill and underreamer configuration, with cutter knives to mill 7 inch casing and underreamer cutter arms to enlarge up to 16 inch OD, was mobilized to successfully mill the section and enlarge the hole.

Wellbore Integrity Solutions (WIS) in Colombia responded to a customer’s request to plan and execute a challenging section milling operation where the cut out point was required to be at the position of a casing collar, at 2,675 feet.

Operational Parameters – Section Milling

Weight on Bit	Overall ROP (ft/hr)	Average Torque (UTR)	RPM	Flow Rate (BPM)	SPP (psi)
3	14	50 - 100	100	6	1,000

The hole enlargement operation, to 16 inch diameter, was also completed successfully. The customer was then able to conclude the abandonment operation.

Operational Parameters – Hole Enlargement

Weight on Bit	Overall ROP (ft/hr)	Average Torque (UTR)	RPM	Flow Rate (BPM)	SPP (psi)
2	7	10 - 70	70	6	1,200 - 1,350

Experienced WIS personnel worked closely with the customer to plan and prepare the specific procedures for this successful operation.

The condition of the dull knives and underreamer cutters were also evaluated post-run and found to be within tolerance.

