

C4 System successfully delivers Hydraulic Isolation for B-Annulus Barrier in a Well Abandonment operation

CUT CLEAN CONDITION and CEMENT C4 SYSTEM

CHALLENGE

An operator required operational success in an annular barrier behind 7 in. casing in two onshore wells in Latin America on jointed pipe. The operator needed hydraulic isolation in a new cement job after, cutting and cleaning behind the casing for final abandonment.

SOLUTION

The C4 annular barrier system was deployed on two wells on jointed pipe. The use of Gator Mechanical perforator allowed to gain access to the back side of the 7 in casing. The washout of the barite and cement behind the casing was completed with the Jack Hammer to place a new cement column behind the casing.

RESULT

- Successful operation of the cut clean circulation and cement system
- Annular barrier in both wells was completed without any issues



Work Completed in December 2019 in Argentina

Cut Clean Condition and Cementing system allows zonal isolation for two wells in a Well Abandonment campaign.

Two land wells in North America required annular remediation for the 7 in. casing (23lb/ft J-55) in vertical wells. For both wells the casing was Cut with the 600 Gator tool with 30 perforations or cuts were completed with 2.5 ft. (0.75m) spacing across a 75 ft (25m) section, creating a 10.24 sq-in flow area per cut.

Multiple washing passes were then made with a 588 Jackhammer and LES speed squeeze packer as a fluid diversion device to clean cement and debris behind the casing.

After the successful clean and cut operation a new cement plug with Class G cement was put in place providing hydraulic isolation.

The solution was provided with the combination of the C4 system:

- Gator – A hydro mechanical perforator creating unlimited cuts/perforations per run. It also creates window featured perforation for directing flow in the B-annulus and for engaging with the Jack Hammer tool for vibration during washing.
- Jack Hammer – Impact vibration and jetting used to break up and dislodge stubborn cement or barite during washing.
- Packer Diverter – Used to create a choke point in the A-annulus to force the fluid flow path into the B-annulus for a more effective clean out



The Jack Hammer features jetted extended pistons that engage with the Gator Perforator cuts to dislodge cement and debris behind the casing.

