



## **HydraArchimedes™**

### **DESCRIPTION/APPLICATION:**

The HydraArchimedes™ tool was developed to enhance the quality of the cross sectional plug for P&A and slot recovery applications utilizing the HydraSystem™ Tools.

The HydraArchimedes™ tool is rotated in wet cement forcing cement out through the perforations, efficiently filling the annulus leaving no voids. The cement is pushed out through the perforations by the HydraArchimedes™ helical rubber blades which act on the cement both hydraulically, by generating high/low pressure regimes, as well as by mechanical displacement.

### **OPERATION:**

The HydraArchimedes™ tool is connected directly above the wash tool, either HydraWash™ or HydraHemera™, and spaced out across the perforated section. After perforating the casing, the interval is washed thoroughly with the HydraWash™ until sufficient pump rates with minimal pressures are achieved. A ball is then dropped to activate the hydraulic release system that separates the HydraWash™ tool from the Cement Stinger and the HydraArchimedes™ tool, allowing pumping of the cement.

When pumping cement across the perforated interval, the HydraArchimedes™ tool is rotated while slowly POOH. If the interval to be treated is longer than a drill pipe stand, at least two HydraArchimedes™ tools are spaced out accordingly. When breaking the connection to lay out a stand, the cement will 'u-tube', hence no more pumping of cement is possible.

The HydraWell™ Cement Stinger and HydraArchimedes™ tools will then be pulled above TOC and the P&A plug tested according to the Operator procedures prior to POOH.

### **FEATURES/BENEFITS:**

- One trip plugging system
- Enhanced plugging efficiency
- Field proven
- Simple design and operation
- Replaceable blades
- Available for all casing sizes



\*\*Patent Pending