

#### Locations

#### Norway

#### United Kingdom

#### Malaysia

# www.hydrawell.no

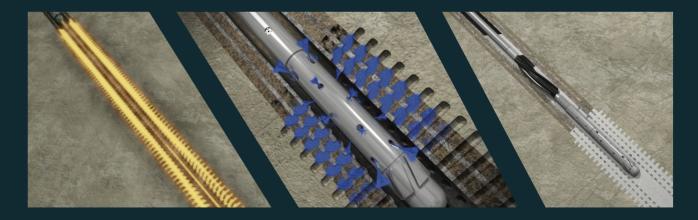
# **Global** Footprint

HydraWell is a rapidly growing well integrity specialist providing a range of step-changing proprietary tools and associated services to oilfield operators and service providers.

We have designed, developed, tested and commercialized a proprietary plugging technology product suite referred to as the Perforation, Wash & Cement (PWC®) system for wellbore applications. The Company is exposed to the permanent plugging and abandonment (P&A), slot-recovery and wellbore repair markets. HydraWell offers the products as a service to oilfield operators and oil service companies.

HydraWell is continuously developing its products and service offering responding to customer requirements and industry challenges. Our teams located in Stavanger, Aberdeen and Kuala Lumpur are focused on delivering high quality services with the utmost attention to safety in all aspects.

# PWC® technology

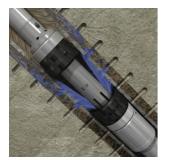


Rock to rock well barrier



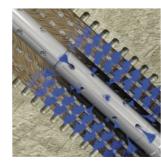
### **Technology Portfolio**

Generation 1



HydraWash™
Limited Entry PWC®

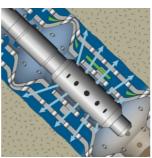
Generation 2



HydraHemera™

Jet PWC®

Generation 3



HydraArtemis®

The Generation 1, HydraWash™ system was invented by HydraWell in 2009 and is the original PWC® cup tool system. It uses the principle of limited entry to force wash fluid into the entire annulus. This clears debris, such as settled out barite, traces of formation and traces of cement, from the annulus, prior to installing rock to rock barrier material.

The Generation 2, HydraHemera<sup>™</sup> was initially designed for dual casing applications. However, today the HydraHemera<sup>™</sup> system is the bench mark with many Operators for both single and dual casing applications. This high energy jet based PWC<sup>®</sup> system is not restricted by annular cement conditions which allows rock to rock barriers to be installed in 36 hours.

The Generation 3, HydraArtemis®, currently under development, uses the existing PWC® systems to bring a step change in P&A performance by delivering plugs in the existing production tubing and casing. This can reduce the cost of P&A by over 50% compared to current technology by eliminating the need for drilling rigs to remove tubulars from the wells.

#### HydraHemera™ System



- 1 Internal Cement Foundation (ICF)
- 2 Release Tool
- 3 HydraHemera™ Jetting Tool
- 4 Cement Valve
- **5** Circulation Sub
- 6 HydraArchimedes™

#### **PWC®**

The PWC, Perf-Wash-Cement® method enables highly efficient installation of rock to rock barriers. Access to the annulus is created by perforating the casing. The annulus is then cleaned and the cross-sectional plug installed. Running the PWC® as a one trip system, results in the installation of a HydraHemera™ plug in 36 hours.

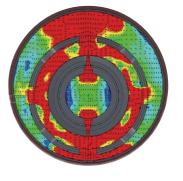






## **Engineered Barriers**

Delivering a reliable well barrier each time is important for our customers. HydraWell is continuously optimizing the barrier installation process by applying advanced computational fluid dynamics to our innovative downhole technologies. This analytical approach has been validated through extensive testing onshore and offshore.





# **Step Change in Performance**

Operator experience has demonstrated that up to 9 rig days can be saved per plug by replacing section milling with PWC<sup>®</sup>.



#### **Proven Track Record**

- 294 plugs installed
- 97% plug success rate
- 18 operators
- 11 countries

# **PWC®** Applications

- Permanent P&A
- Slot recovery
- Restoring annulus integrity
- Casing shoe repair
- Stabilizing casing exit
- Zonal isolation