



# H2Oil Group of Companies

Complete Well Lifecycle Experts

Advanced Well Testing Data  
Acquisition Techniques



# What we offer

## Overview

H2Oil offer extensive independent consultancy expertise in management, engineering and supervisory services across the complete asset lifecycle, from initial phases of field conceptual design to end of life abandonment operations.

This presentation has been specifically tailored as a summary of a selection of our advanced in house well testing and completions data acquisition techniques.

In this presentation we will focus on the below topics:

- Advanced Data Acquisition Techniques - Validation and Optimization:
  - Water Cut – Instream Measurement of Water Cut
  - Density – Accurate temperature corrected device
- Live offsite data stream to client and to supervisors onsite:
  - Offsite viewing and analysis
  - Onsite viewing and analysis

# Advanced DAQ Solutions

## Overview

During well testing activities acquiring pertinent data using manual technique causes room for error.

At H2Oil we strive to provide advanced data collection techniques for campaigns. Providing an engineered solution which replaces human error margin and providing repeatability for data allowing onsite decision making. H2Oil are focused on fixing problems, using efficient and innovative solutions that normally are not considered. Our aim is focused around delivering quality well test data and analysis. Whilst enhancing safety by reducing HSE exposure to the well stream.

We operate using high advanced technology such as:

**Server** – IoT based server – allowing on and offsite sharing and processing of data – allows clients to connect remotely and view ongoing operations – allows for seamless integration into Well Testing analysis packages.

**Augmented Reality Display** – Viewing of data anywhere onsite at all times,

**ATEX Tablet** - Industry Tablet PC - Viewing of data anywhere onsite or offsite

**Advanced Density Meter**- Portable Density Meter – Accurate/Repeatable density readings (only 1ml sample needed)

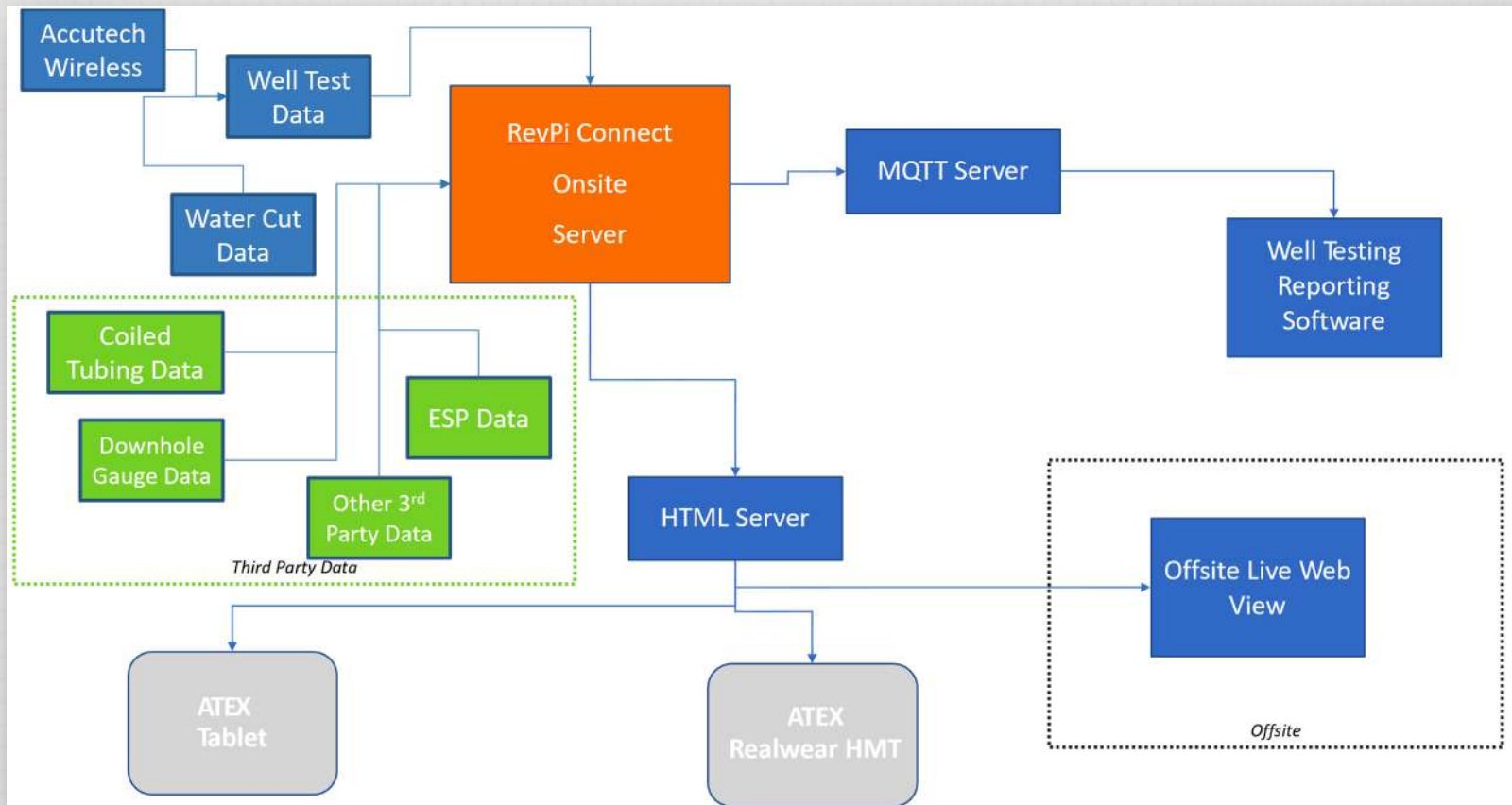
**DAQ Sensors** – Wireless Sensor Network – Rapid and accurate DAQ Package

**Water Cut Meters** – Instream/accurate monitoring of water cut and oil traces

# Advanced Data Acquisition

## Data Flow Overview

Multiple data sources and processing of data – allowing for a combined high resolution report



# IoT-Internet of Things - Server

## Advantages

Our Brain - Connecting and Processing all on/offsite data

Allow Integration of All well site data hardware Seamlessly Into the System

Open Source Data which allows Continuous Equipment Communication

## Specifications

- Multiple data sources via wireless and wired for third party connection onsite:
  - Downhole Pressure Gauges
  - ESP Data
  - Coil Tubing Data
  - Stimulation Data
  - Process Facilities Data
- High Resolution of data gathering possible – 10 readings per second per device. Up to 512 simultaneous devices and readings supported.



# Data Anywhere – Heads-up Display

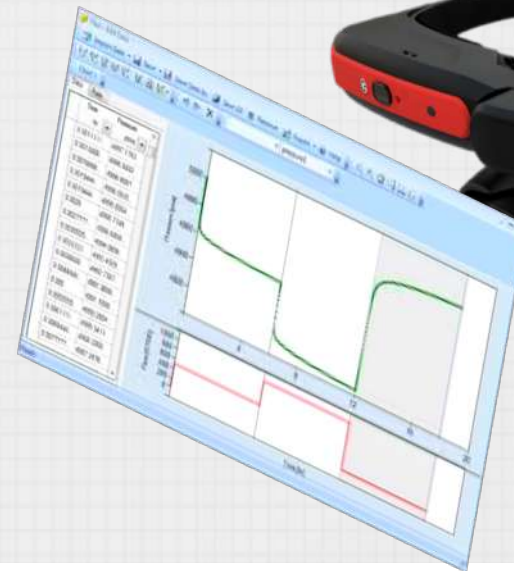
## Advantages

All data at a glance  
allowing assistance with  
onsite decisions

When having a potential issue ongoing on site allows you to  
monitor live the issued data while tackling the problem  
(e.g. Excessively pressure build up )

## Specifications

- Optimized for completely hands-free voice control for use in Zone Rated environments (ATEX Certified)
- The high-resolution micro display fits just below the line of sight and views like a 7" tablet
- While working allows hand free use for remote mentor video calling, onsite data viewing of all well parameters, document navigation, digital workflow and communication.



# Water-cut Meter

## Advantages

Detect well clean-up parameters live.  
Advantage during potential H<sub>2</sub>S wells as reduces HSE exposure while sampling.

Allows sampling of  
multiphase water-cut data at  
5 second intervals

Measurement uncertainty  
as low as  $\pm 0.2\%$

## Specifications

- Measurements across the full range of water cut from 0 to 100 percent
- Measure water cut in gas-volume fractions up to 99.5%
- Enables configuration of communications, perform one-button fluid calibrations, and check system diagnostics from a PC.
- All data viewable on our DAQ system including HMT and Tablet.



# Bartec Industry Tablet PC

## Advantages

Assisting in Problem of Communication and site awareness During well testing or well service activities

Allows Onsite View of all well site data

Our Clients Can Visualize Live Data in their own custom format

## Specifications

- Perfect assistant to service technicians, engineers and project managers in the field.
- ATEX Zone Rated
- Allows complete view of data from all site operations:
  - Well Testing Data
  - Coil Tubing Data
  - ESP Data
  - Downhole Data
  - Sampling Data





# Density Meter

## Advantages

Easy operation  
With repeatability

Measuring Cell with Inspection  
Window and Backlight

Acquire data for both water and oil

## Specifications

- Storage of up to 1024 measurement results including time stamp and sample ID
- Integrated conversion tables for simple density and concentration measurement
- Accuracy to 4 decimal places
- Safe to use in Zone rated environments (ATEX/CE Certified)



# Accutech - Wireless Sensor Network

## Advantages

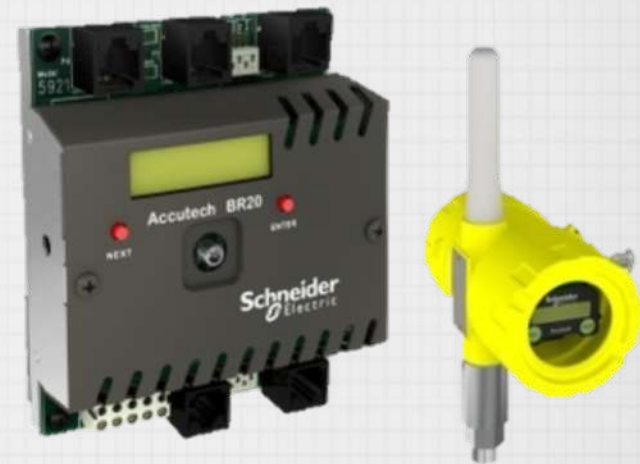
No wires, trenching or conduit required allowing a quick install with no trip hazards

Data from a distance up-to 1.6km range between sensors

Rapid-deploy networks without comprehensive engineering

## Specifications

- Measurements and control via wireless sensor networks
- Pressure, temperature and tank level measurement in any process from 0 psi to 15,000psi. From minus 40degC to 150degC
- ATEX/CE Certified



# Award Winning

## Best Global Well Testing Specialists - 2018 + 2019

## Best Petroleum Exploration & Development Consultancy Europe - 2019

After being nominated via our clients for “Best Global Well Testing Specialists” in 2018 and 2019 via SME News, we were pleased to rise above the other finalists, to be awarded this recognition.

We are also very proud to have won best Petroleum and Development company in Europe for 2019.

We would like to acknowledge this would not be possible without our management and field staff.

H2Oil continues to assist operators with their programs providing an advanced solution with efficiency, results driven and with safety at the forefront.



# Global Experience



Combined

Global Experience

Our management team has over 100 years of operations experience covering locations from desert environments to HPHT ultra deep water projects from Frozen Methane hydrates to Heavy Oil projects. Bringing you the most advanced solutions for Data Acquisition from around the globe.

# OUR CONTACT DETAILS

Head Office in London with operating offices in Romania (Baia Mare) and Kyiv (Ukraine)



**WEBSITE:** [www.h2oil.co.uk](http://www.h2oil.co.uk)

**EMAIL:** [sales@h2oil.co.uk](mailto:sales@h2oil.co.uk)

**PHONE:** +40720395329



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