



DIVERSIFIED

WELL LOGGING, LLC

Automated Remote Mudlogger (ARM™)

Applications:

- Vertical and lateral drilling
- High rates of ROP
- Exploration wells
- Sweet spot/Lateral targeting
- Stratigraphic correlation
- Input for engineered completions
- Geosteering applications
- Replacement of coring runs
- Replace downhole FE tools

Benefits:

- Automated data collection
- Reliable high data density
- No operational disruption
- Simple installation
- Reduced uncertainty
- Less personnel onsite
- Priced for every well
- Cost effective

More Information Contact DWL:

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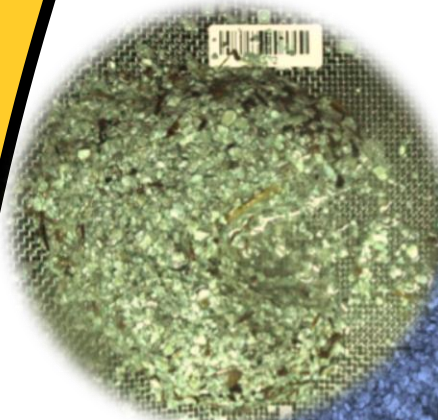


The **ARM from DWL** is the oil & gas industry's only **fully automated** sample collection device designed for the challenging rigsite environment.

The ARM's automated technology collects samples as fast as **one sample per minute**. Even drilling at the highest drilling rates, the ARM provides a major step change in improved and **accurate geologic evaluation**.

The ARM has a **minimal footprint** on location and will be installed within a couple of hours with no operational downtime. Once installed, up to 300 samples can be collected before the collection reel needs to be changed. Using onsite XRF for **timely examination** of the samples the ARM provides valuable insights into the rock's elemental and mineralogical nature.

The ARM has **remote access** allowing it to be controlled and samples viewed in realtime. This helps **reduce personnel** at the rigsite while maintaining an **economic and reliable** service for the Operator.



Samples bar-coded and viewed under white and UV light.

Permian Basin Case History

ARM & Elemental Analysis

The ARM System was deployed on a core drilling program with XRF elemental analysis being carried out on the samples collected by the ARM at its high resolution sampling rates. From the chart below it is clear that the elemental data follow and capture the same trends as data from analysis of the core and downhole tool data. It can be seen that the ARM successfully collects samples that are fully representative of the interval drilled.

On this and other operations, the ARM has proved to be a most reliable method of collecting and storing cuttings with up to ten samples per hour being easily achieved. By using high resolution sampling and applying XRF analysis, the Operator is provided the opportunity to economically optimize wellbore completion through a far greater understanding of the geology and geomechanical properties of the formation.

For more information about the ARM's operational success please contact DWL at info@dwl-usa.com

