

DEBRIS MONITORING SYSTEM (DMS™)

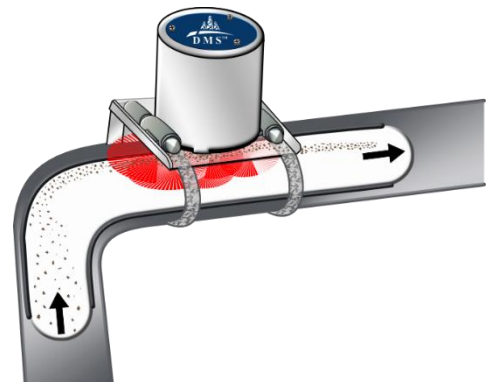
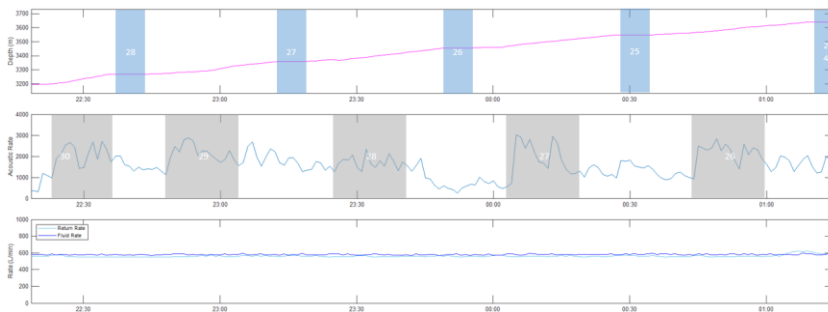
ECWS Debris Monitoring System (DMS™) provides real-time qualitative measurement of solids and fluid return rate in the flowback line. Allowing immediate action to be taken by the job supervisor, depending on DMS™ values displayed and recorded. The DMS™ is typically used in milling or clean-out operations.

The DMS™ combines acoustic and ultrasonic technology that enables monitoring of the flowback line. It is a passive, non-intrusive system that is quickly and easily setup and mounted externally onto the flowback line.

Utilizing the DMS™ provides a complete picture of the flowback line and confirms if solids such as plug debris, sand, and scale are consistently being circulated back to surface. This allows us to maintain improved hole cleaning efficiency, reduce the risk of a CT stuck pipe situation and eliminate the associated non-productive time (NPT). Improving job execution and reducing the overall job time.

ECWS DMS™ Benefits:

- ✓ Real-time monitoring of plug debris returning to surface
- ✓ Quick and easy setup that is mounted externally to the flowback line
- ✓ Ensure consistent transport of solids to surface to improve hole cleaning efficiency
- ✓ Respond immediately to sudden or gradual loss in return rate
- ✓ Decrease the risk of a stuck pipe situation
- ✓ SPE Paper – 204451



For the graphs above, the blue shaded area shows plug position and the grey area shows the increase in acoustics signal as debris is detected by the DMS™.

